USER MANUAL

(317) 274-3942
Web: continuousassurance.org
App: www.mir-swamp.org
Twitter: @swampteam

Technical Support

The SWAMP offers 24/7 support 365 days a year. Following is contact information for the SWAMP:

- Dial (317) 274-3942 (24/7/365)
- Email: support@continuousassurance.org

To create a support ticket, go to https://ticket.continuousassurance.org or email support@continuousassurance.org

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Preface

This document guides selected users to successfully use the Software Assurance Marketplace (SWAMP).

The SWAMP is state of-the-art software designed to serve as an open resource for software developers, assurance tool developers and researchers who wish to perform continuous assurance (CSwA) testing in a safe, secure environment.

The SWAMP is funded by the Department of Homeland Security, and directed by academic experts in high-throughput computing, identity management, and security from the following organizations: the Morgridge Institute for Research, the National Center for Supercomputing Applications at the University of Illinois at Champagne-Urbana, the Center for Applied Cybersecurity Research at Indiana University and the University of Wisconsin-Madison.

Introduction to the Software Assurance Marketplace (SWAMP)

The SWAMP is a national, no cost resource for software assurance (SwA) technologies, used across research institutions, non-governmental organizations and civilian agencies and their communities as both a research platform and a core component in the software development life-cycle.

It is our vision that widespread adoption of the SWAMP services will lead to a more secure and safer software ecosystem.

The Software Assurance Marketplace (SWAMP) channels the mission of the Department of Homeland Security Science and Technology Directorate's (DHS S&T) Cyber Security Division by:

- Developing and leveraging technologies, tools and techniques to defend and secure current systems to better protect critical infrastructures against attacks from our adversaries,
- Facilitating technology transition through a marketplace approach where a collection of innovative technologies can be harnessed by the community, and
- Providing a collaborative research environment by which DHS customers, agencies of the U.S. government, academia, private industry and international partners can exchange technical and research ideas to help advance software security and quality improvements.

The SWAMP may be used without cost by open-source, for profit, and non-profit organizations to test software for vulnerabilities and/or security risks. The accessibility of the SWAMP allows users at all levels to engage in the software development life-cycle. A user can upload his/her Software Package and/or Assessment Tool to the SWAMP for SwA testing. At launch, users will have access to over 100 Software Packages on the most popular Platforms (operating systems).

The SWAMP protects your intellectual property and personally identifiable information. You control access to your Software Packages, Assessment Tools, and software Assessment Results.

In the future, the SWAMP will offer the most frequently requested Software Packages, Software Assessment Tools, and Platforms.

The SWAMP currently provides the following software assurance services:

1. For software written in one of the top three programming languages:
    1. Java
    2. C
    3. C++
2. For assessments using one or more most popular open-source static code analysis tools. Specifically:
    1. FindBugs ~ On any supported Linux operating system supporting JVM 1.7.0_17 or greater
    2. PMD ~ On any supported Linux operating system supporting JVM 1.7.0_17 or greater
    3. Clang Static Analyzer ~ C/C++ for any supported Linux operating system
    4. Cppcheck ~ C/C++ for any supported Linux operating system
    5. Gcc ~ C++ compiler
3. For software that runs on one or more of these popular Platforms (operating systems):
    1. Red Hat Enterprise Linux 6.4 32-bit
    2. Red Hat Enterprise Linux 6.4 64-bit
    3. Fedora 18 64-bit

4. Fedora 19 64-bit
5. Ubuntu 12.04.2 64-bit
6. Debian 7.0 64-bit
7. Scientific Linux 5.9 32-bit
8. Scientific Linux 5.9 64-bit
9. Scientific Linux 6.4 64-bit

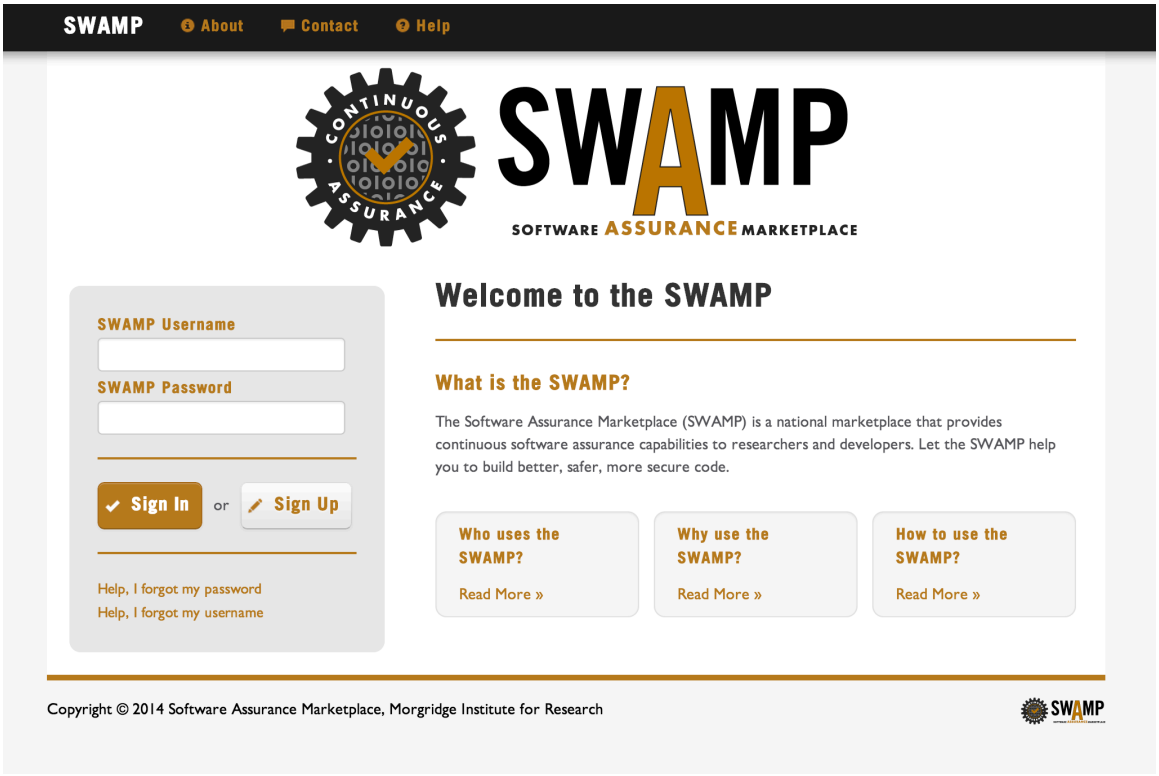
Part 1: Registration

Accessing the SWAMP

The SWAMP is a web based software application. You can run the SWAMP using most modern web browsers. We recommend the following:

- Chrome 7.0 or later
- Firefox 4.0 or later
- IE 10.0 or later
- Safari 5.0 or later
- Opera 12.0 or later

To use the SWAMP, open up your web browser and go to: https://www.mir-swamp.org



Registering with the SWAMP

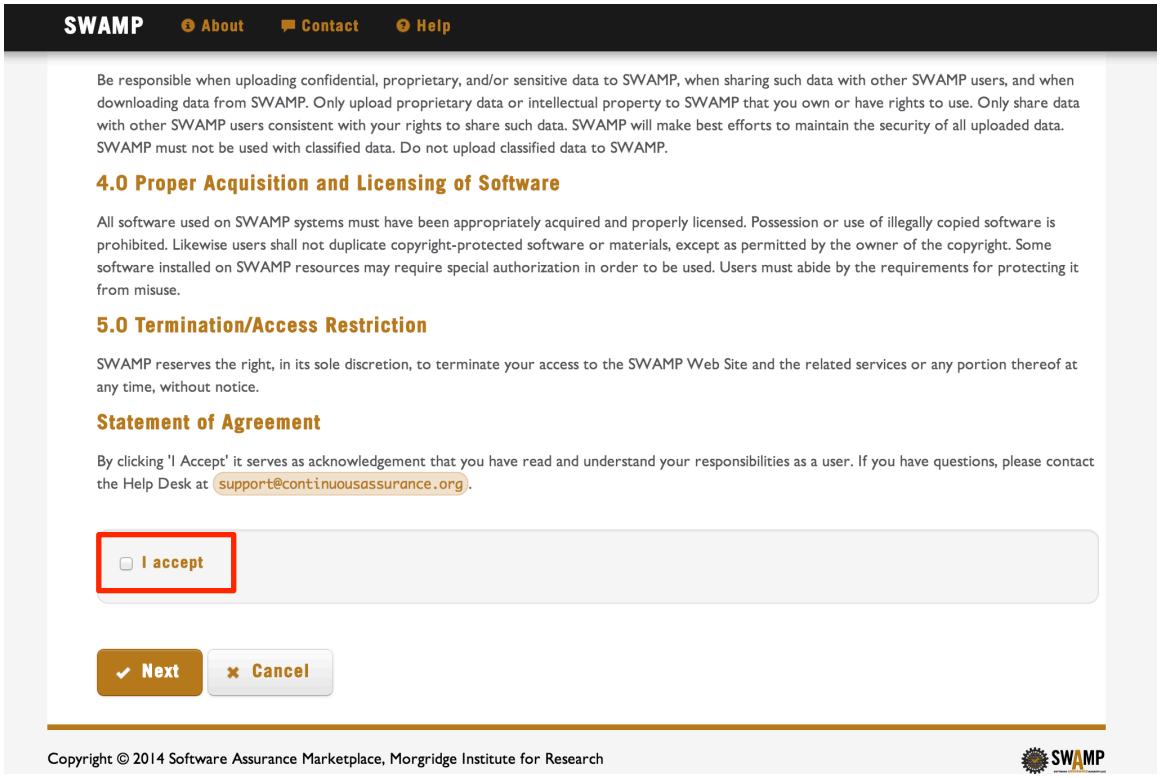
In order to access the SWAMP, a user registration form must be submitted and will require some personally identifiable information. You may have more than one SWAMP user account. A different email address or login identifications will be needed for each additional user account that is created. You may use the same email address and personally identifiable information in additional SWAMP user accounts that was used in your initial SWAMP user account.

Please note that your privacy is important to us. We will not provide your personal information to other organizations.

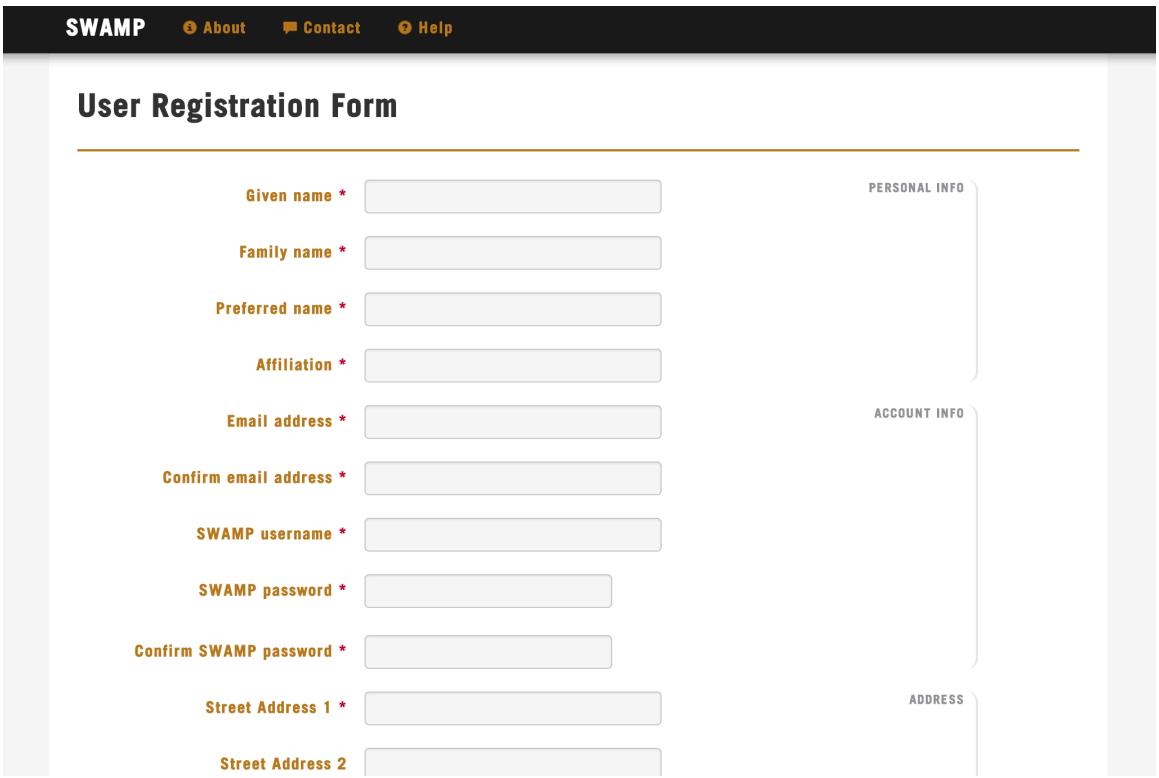
Follow the steps below to register with the SWAMP.

***Note:** Inappropriate use of the SWAMP that may or may not violate the **Acceptable Use Policy** will result in **deactivation** of your SWAMP user account. SWAMP reserves the right to terminate your user account at anytime without notice. If this happens, contact SWAMP at support@continuousassurance.org for any questions you may have, to request account reactivation, or to determine next steps to be able to access the SWAMP again.*

1. Navigate to **mir-swamp.org.** Select **Sign Up**.
2. Read and accept the "**Acceptable User Policy**."



3. On the **User Registration Form**, type the requested information, and select **Submit**.



Notes:

- All fields are required, with the exception of Street Address 2.
- For the Email address field, only email addresses from institutions are allowed to use the SWAMP. For example, Jack.Smith@morgridge.org. Freely available email accounts are prohibited, for example, Gmail, Hotmail, and Yahoo.
- For the SWAMP Username field, the system generates an anonymous username to protect the user's identity. The user can change the default username. The username may be recorded in log files.
- For the Phone Number field the country code will be inserted when the user selects "country." Type the area code, and the local number.

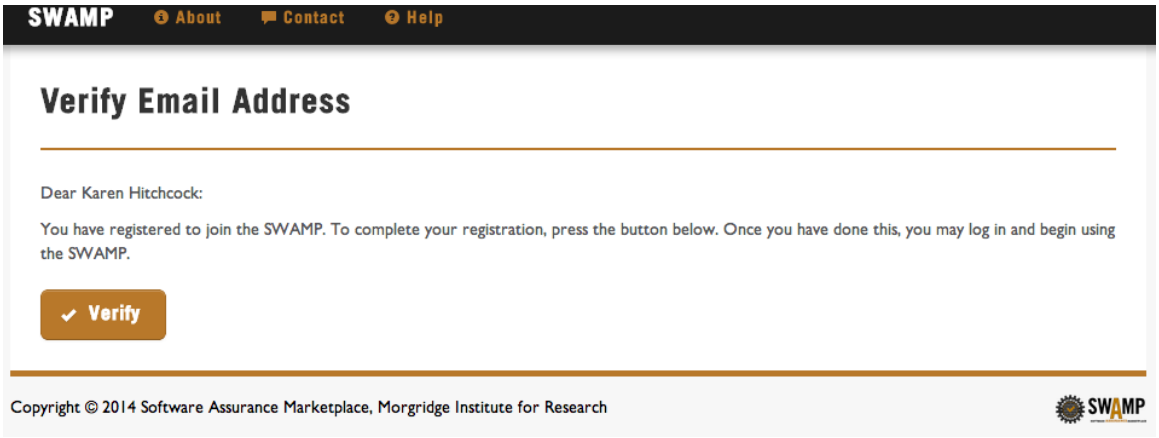
Password Requirements

A strong password is required to complete registration and for access to the SWAMP. The following are the **minimum acceptable** password requirements:

- At least ten characters
- At least one upper case alphabetic character
- At least one lower case alphabetic character
- At least one digit
- Symbols are encouraged
- Do not use words found in the dictionary
- The maximum password length is 200 characters

4. After submitting the registration form, you will be asked to verify your email address. Select **OK**.

5. You will receive a verification email. Within the email follow the instructions to verify your email address.



6. You have now completed the registration process and can sign in to the SWAMP.

******Note:*** *Inappropriate use of the SWAMP that may or may not violate the* ***Acceptable Use Policy*** *will result in* ***deactivation*** *of your SWAMP user account. SWAMP reserves the right to terminate your user account at anytime without notice.*

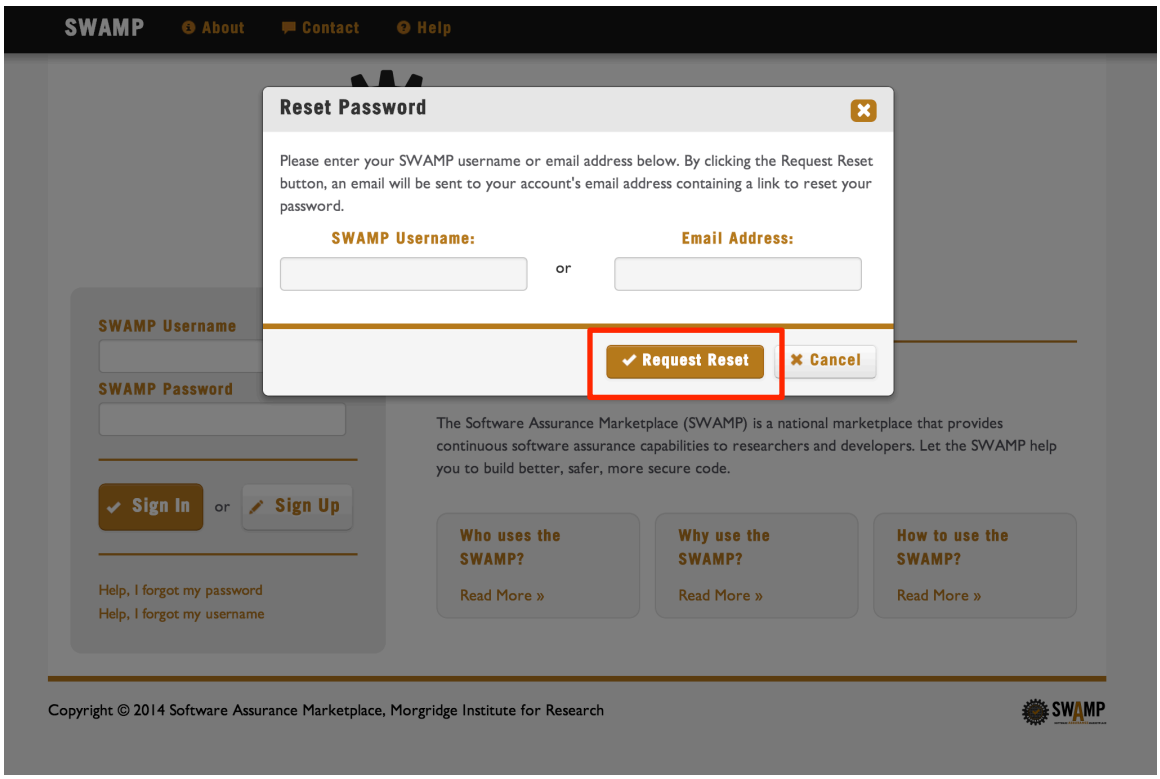
Forgotten Username/Password?

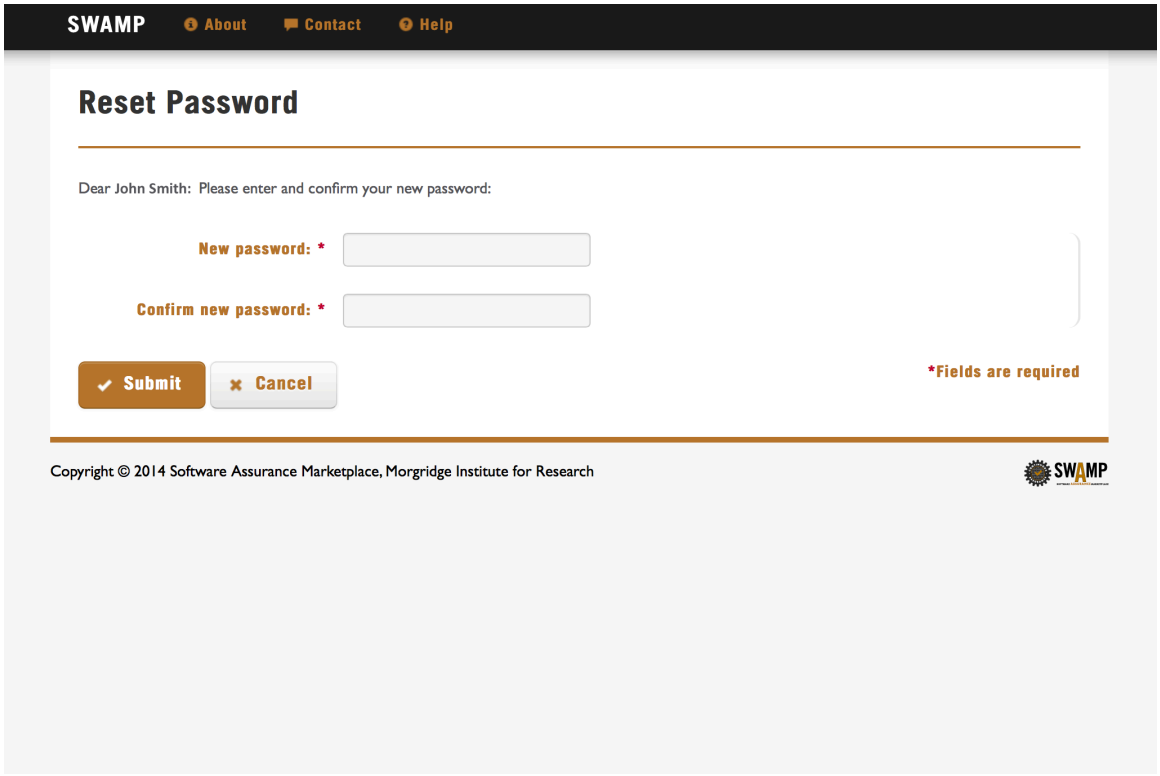
If you have forgotten your login information, navigate to the **Welcome to the SWAMP** screen and select **Help, I forgot my password** or **Help, I forgot my username**, depending on what information you are requesting. If you have forgotten your password, you will need to reset your password by following the steps below. If you have forgotten your username, a username request can be submitted by selecting, **Help, I forgot my username** and following the steps on the next page.

Resetting Your Password

1. Select **Help, I forgot my password.**

2. Please enter your SWAMP User Name or Email Address.
3. Select Request Reset.
4. An email will be sent to the email address associated with your SWAMP account containing a link to reset your password.
5. Once you receive this email please sign in and select the link contained in the email to reset your password.
6. Enter and confirm your new password and select **Submit.**





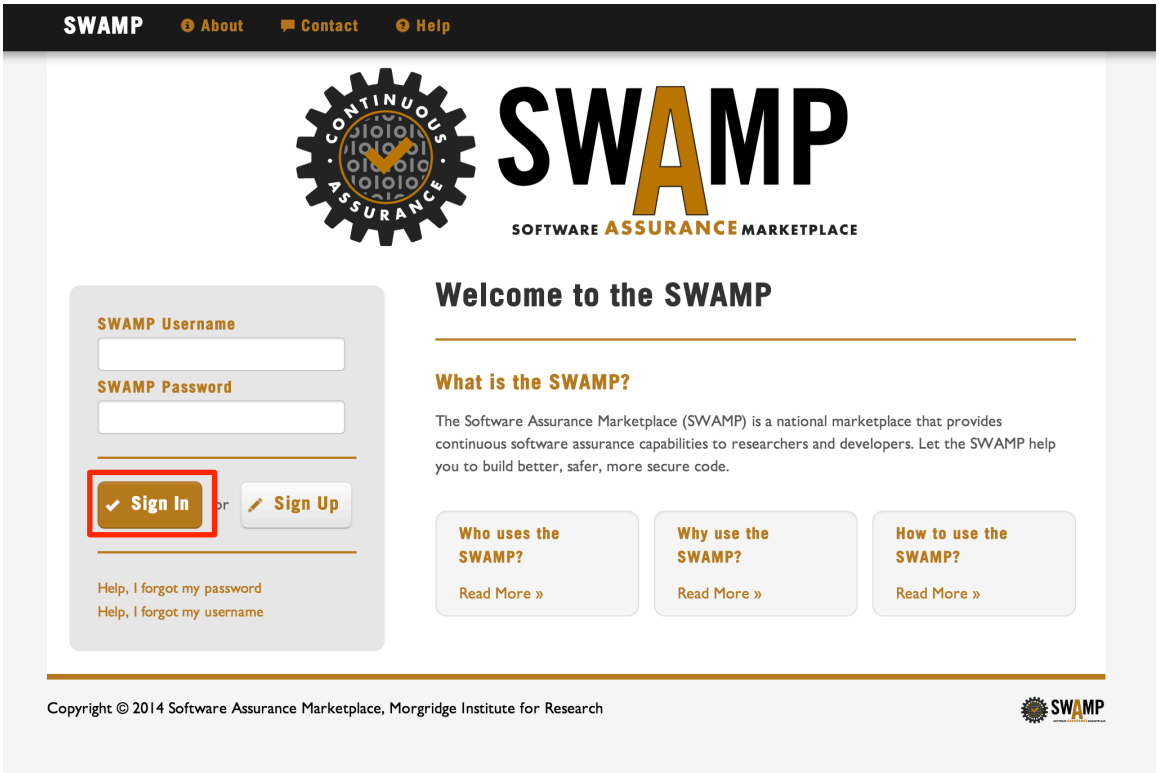
Requesting Your Username

1. Please enter your Email Address.
2. Select Request Username.

3. An email will be sent to the email address associated with your SWAMP user account with your current username.

Signing in to the SWAMP

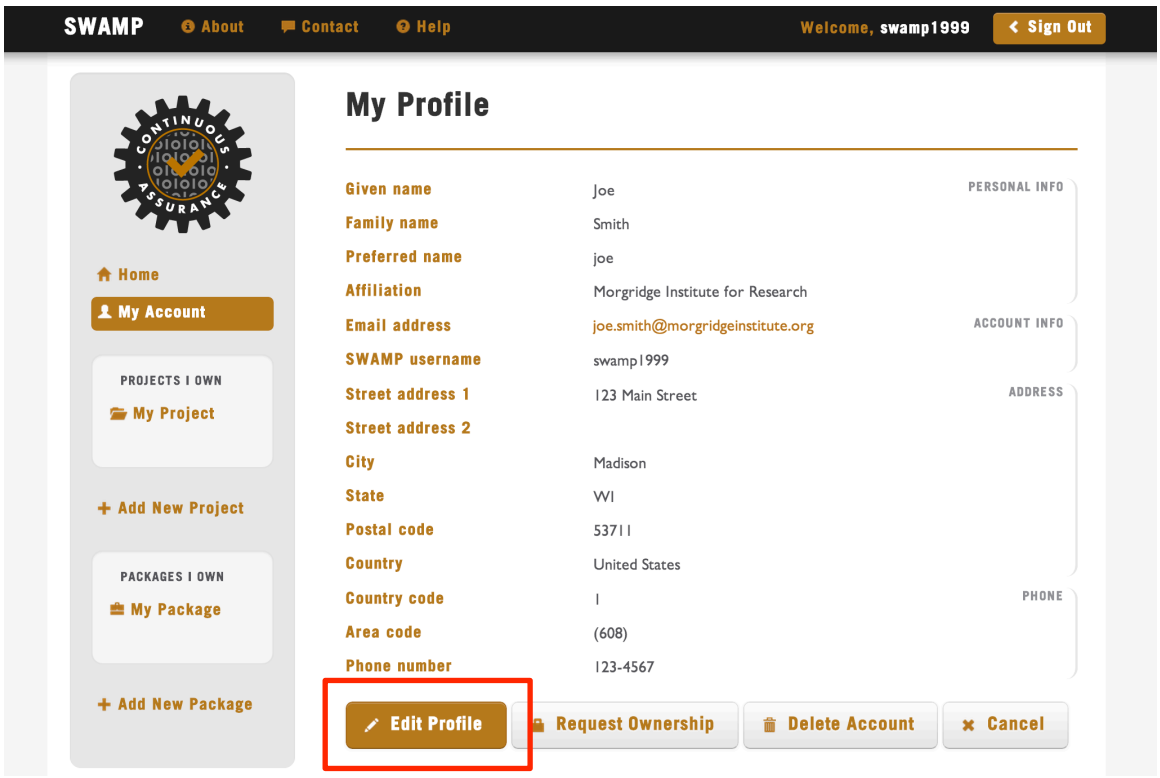
At the **Welcome to the SWAMP** screen, sign in. If you are not yet a registered user of the SWAMP, you must first register. If you are registered, sign in with your username and password to access the SWAMP dashboard.



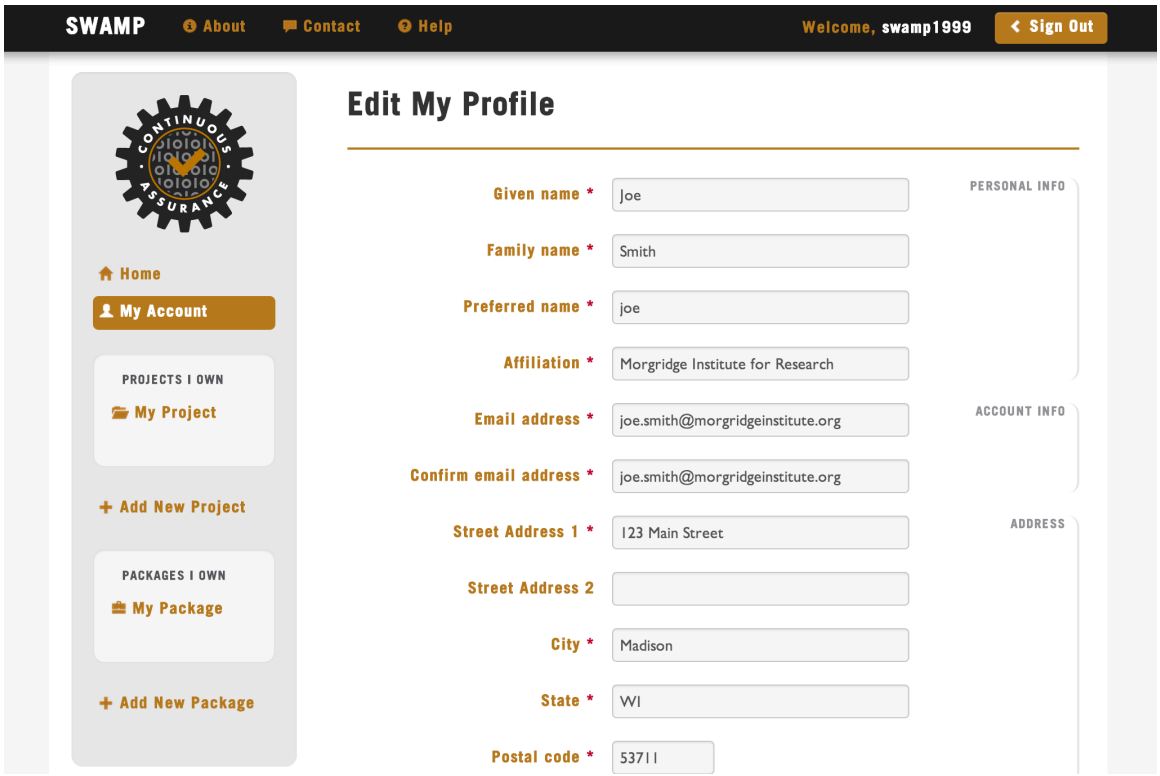
Updating Your SWAMP Account

In the event that your personal information changes, you have the ability to update your personal information in your profile at any time.

1. Sign in to the SWAMP.
2. From the **Home** screen select **My Account** to make changes to your account, such as editing your profile. Select **Edit Profile**.



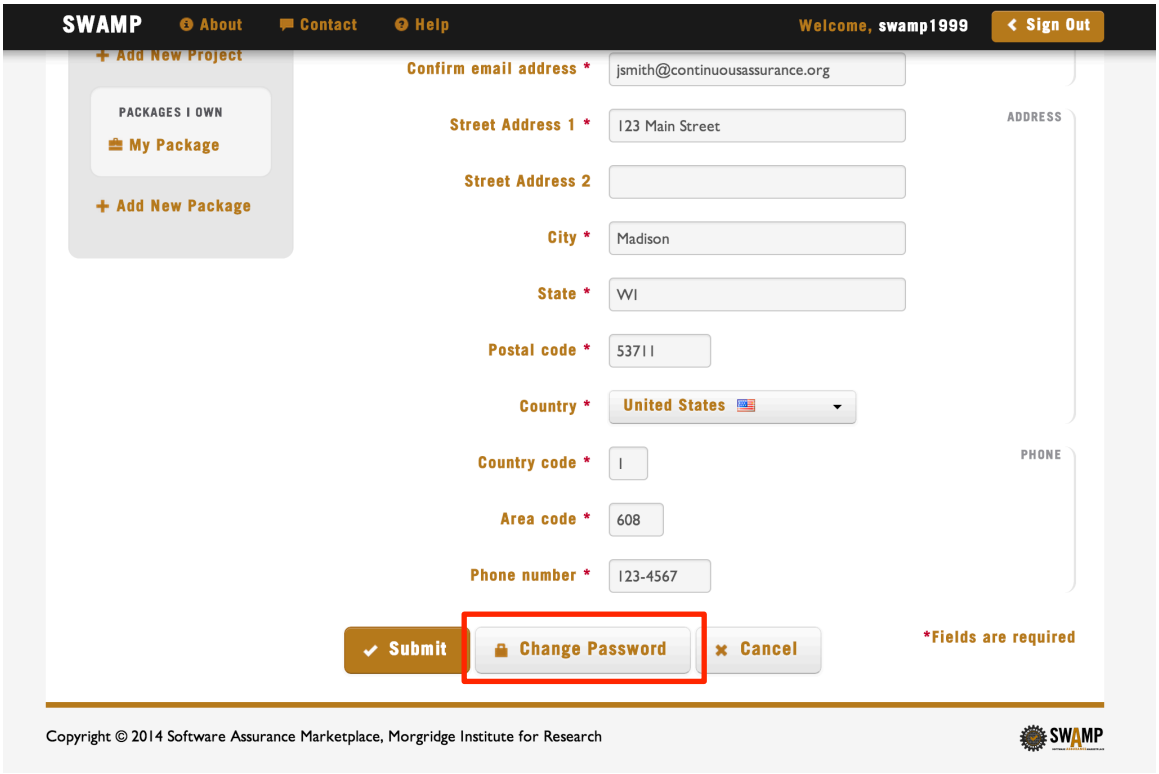
3. On the **Edit My Profile** screen, make the desired changes and select **Submit**.



Changing Your Password

In the event you would like a new password or you feel that your current password might have become compromised at any time, you have the option to change your password.

1. To change your password, select **Change Password**.



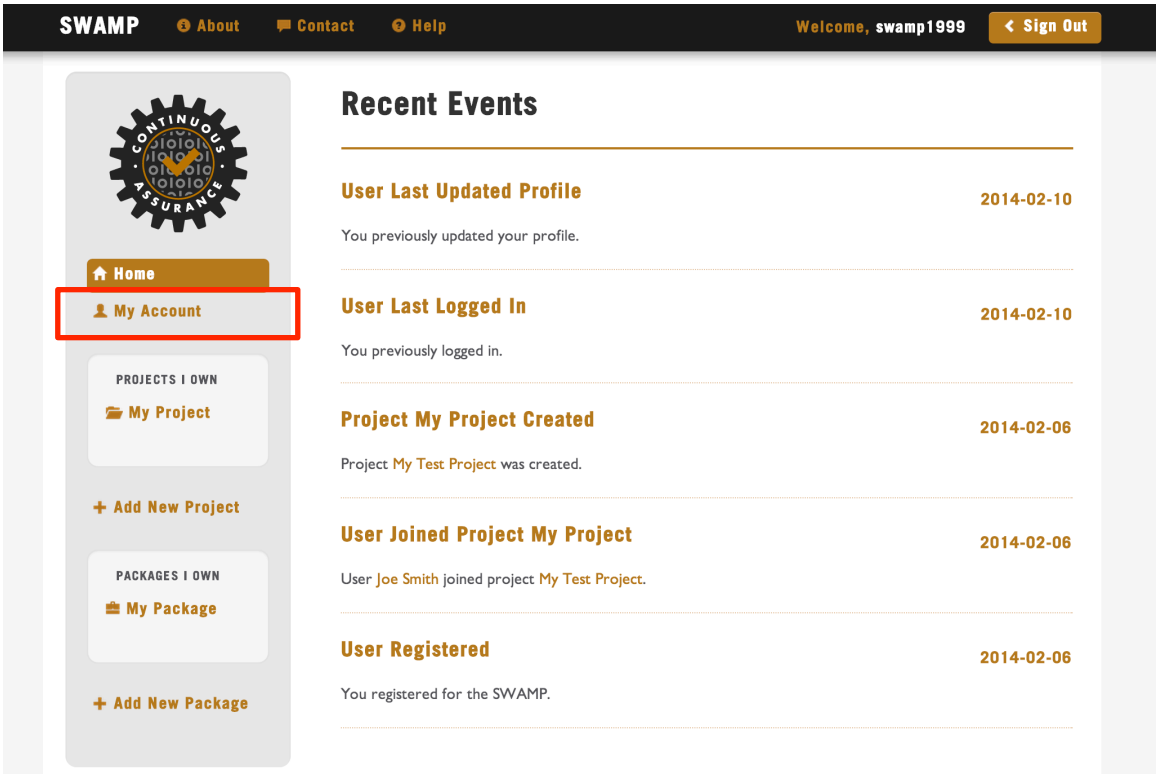
2. See Password Requirements on page 6 for more information about creating a strong password.
3. Type the new password and select **Submit**.

Deleting Your SWAMP Account

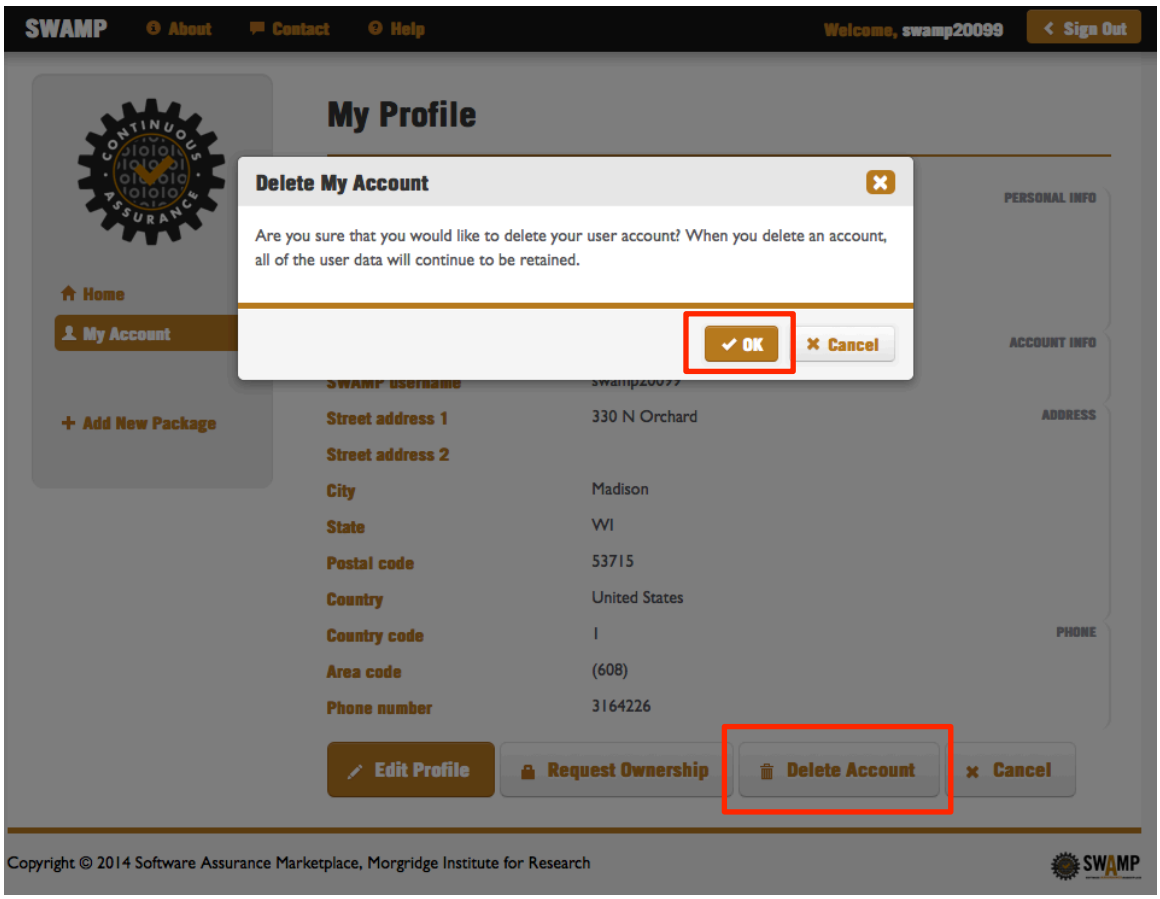
If for any reason you would like to delete your SWAMP user account, you have the option to do so. By deleting your SWAMP user account, you will lose access to all information in your SWAMP user account. The information will be stored in the SWAMP databases. If in the future, you wish to use the SWAMP again, you may register for a new SWAMP user account at any time. You will need to fill out the **User Registration Form** to create a new user account (pages 4-8).

For access to your user account information, contact SWAMP at support@continuousassurance.org

1. To delete your SWAMP account, from any screen select **My Account**.



2. On the **My Profile** screen, select **Delete Account**.

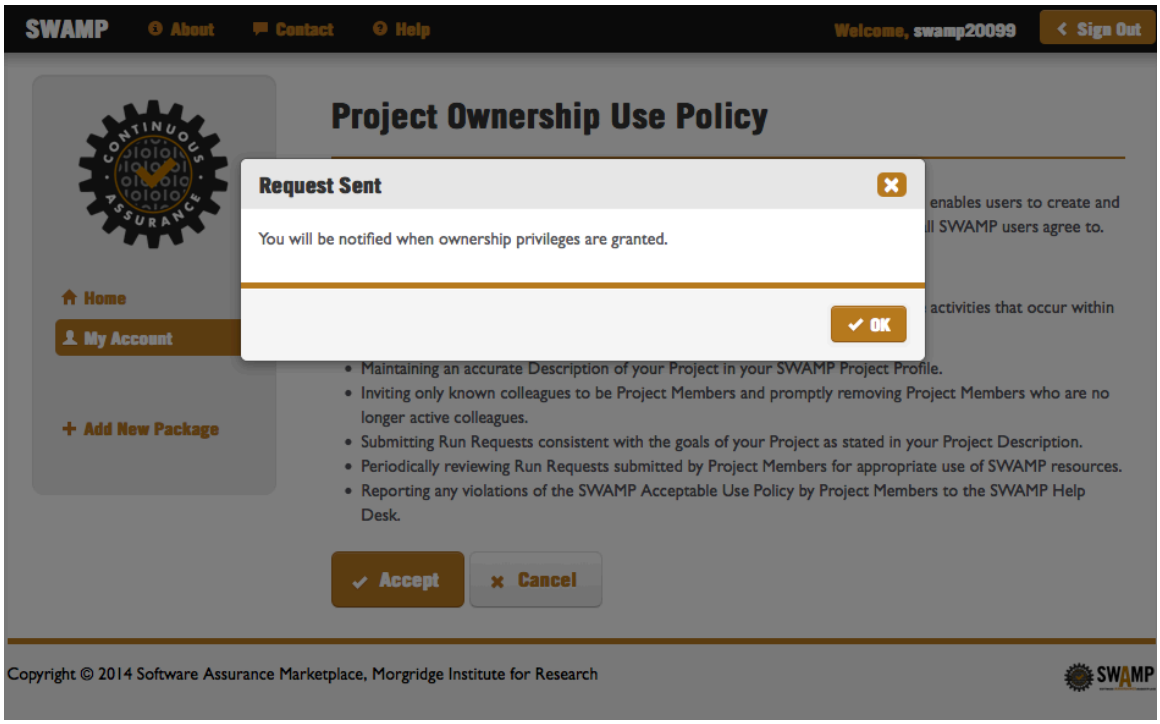


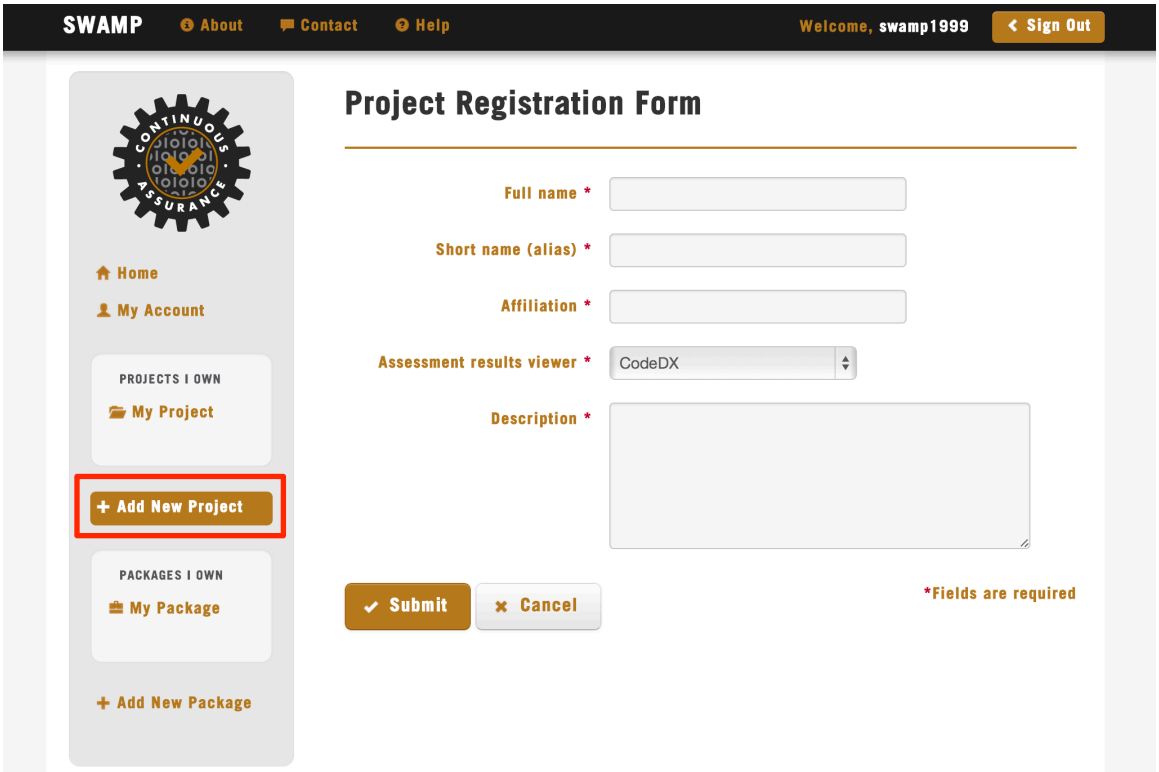
3. You will receive a prompt asking you to confirm the deletion. Select **OK** to delete your account or **Cancel** to cancel your request.

Part 2: Projects

Requesting Project Ownership

In an effort to ensure cybersecurity, users must request Project Ownership status in order to create new projects and conduct assessment runs. Follow the steps below to become an approved Project Owner. Once approved, you may create projects and invite others to join your Project. Project Members can create Assessment Runs, schedule Run Requests, and view Assessment Results. You only need to request Project Ownership status once.





1. On the **Project Registration Form** screen, complete the following fields:

Full name: The full name is the long version of your Project's name used in Project descriptions.

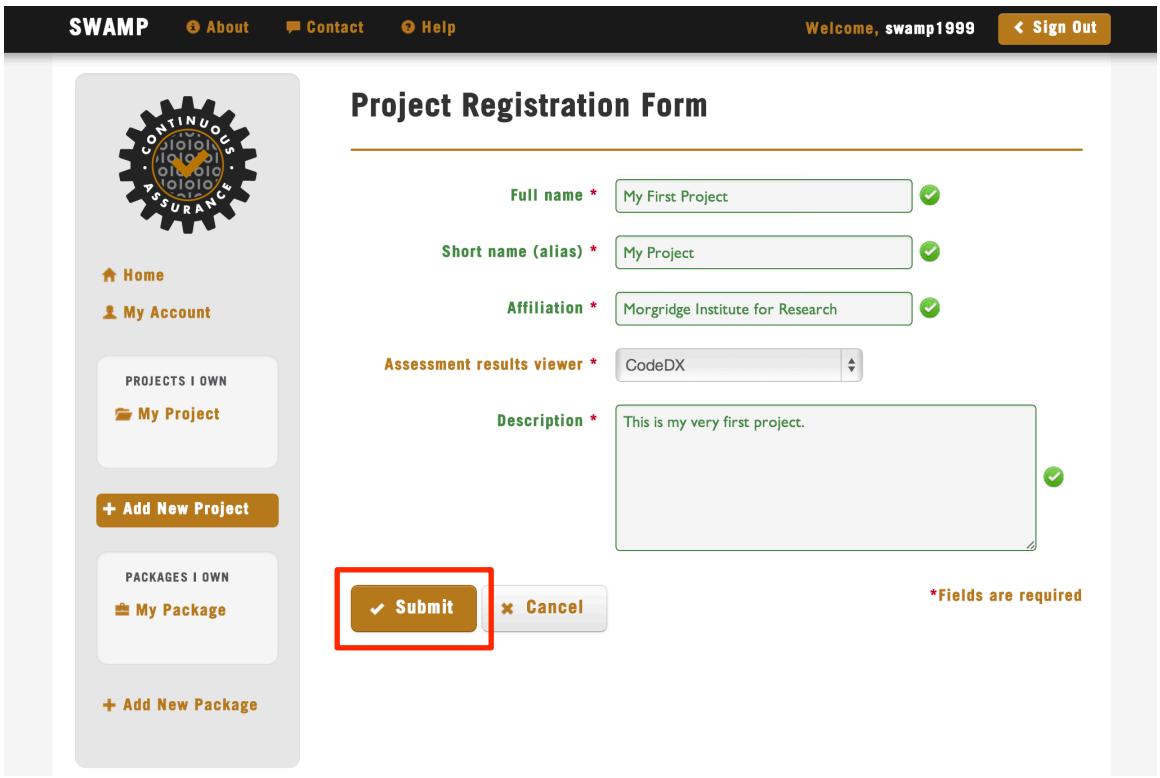
Short name: The Project short name or alias is the short version of your Project's name and will appear in the sidebar.

Affiliation: Please include the company, university, or other organization with which your Project is affiliated.

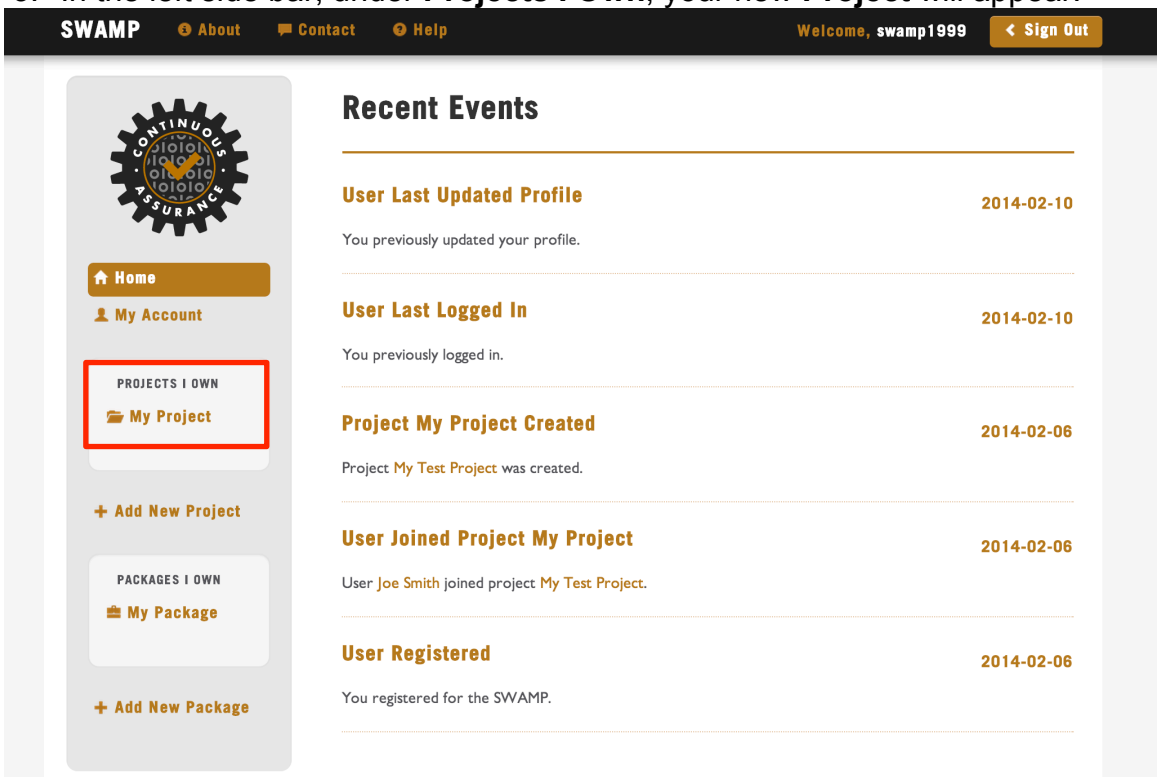
Assessment Results Viewer: Choose the results viewer from the dropdown menu.

Description: Please provide a description of your Project to help a SWAMP administrator approve your Project.

2. Select **Submit**.



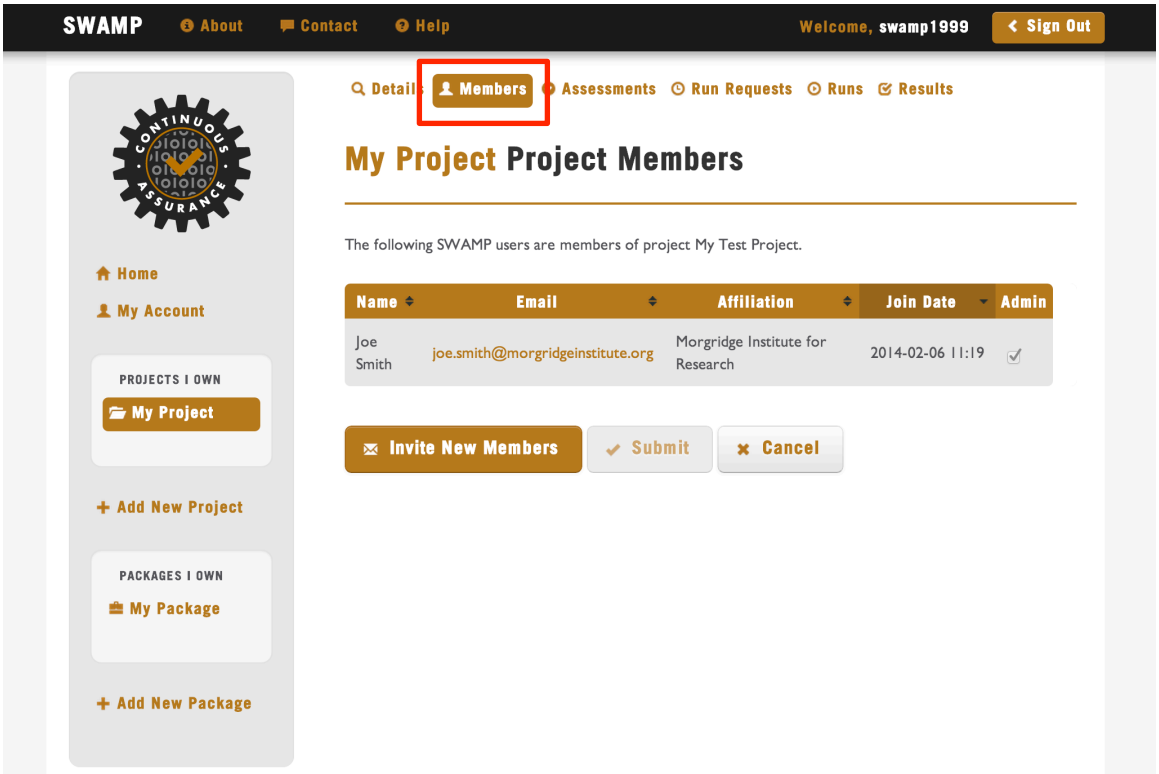
3. In the left side bar, under **Projects I Own**, your new **Project** will appear.



Inviting Members to Your Project

Project Owners may invite others to join to their Project. Invitees do not need to be current users of the SWAMP, but must register with the SWAMP to become a Project Member. Project Members are able to create Assessment Runs, schedule Run Requests, and view Assessment Results. A Project Owner is automatically a Project Member.

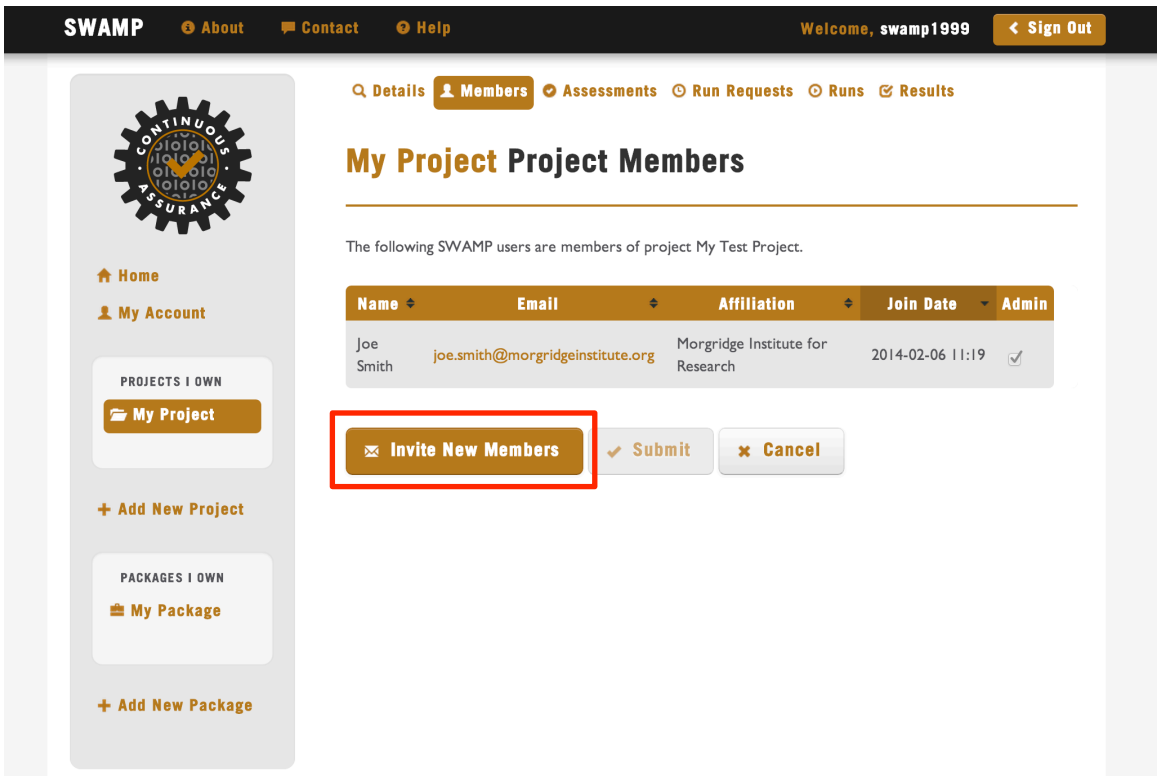
1. The Home screen lists your project under PROJECTS I OWN.
2. Select a Project you own.
3. Select the **Members** tab.



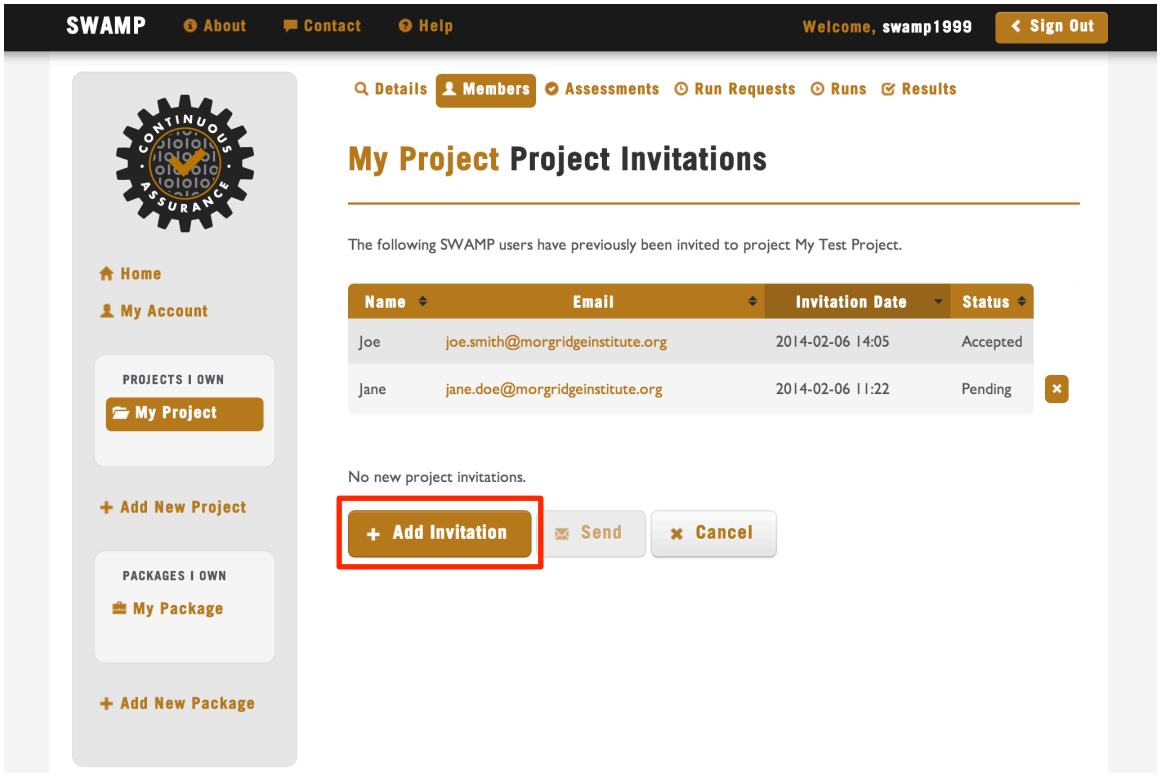
4. The **Project Members** screen appears.

   ***Note: SWAMP automatically lists the Project Owner's name.*

5. Select **Invite New Members**.



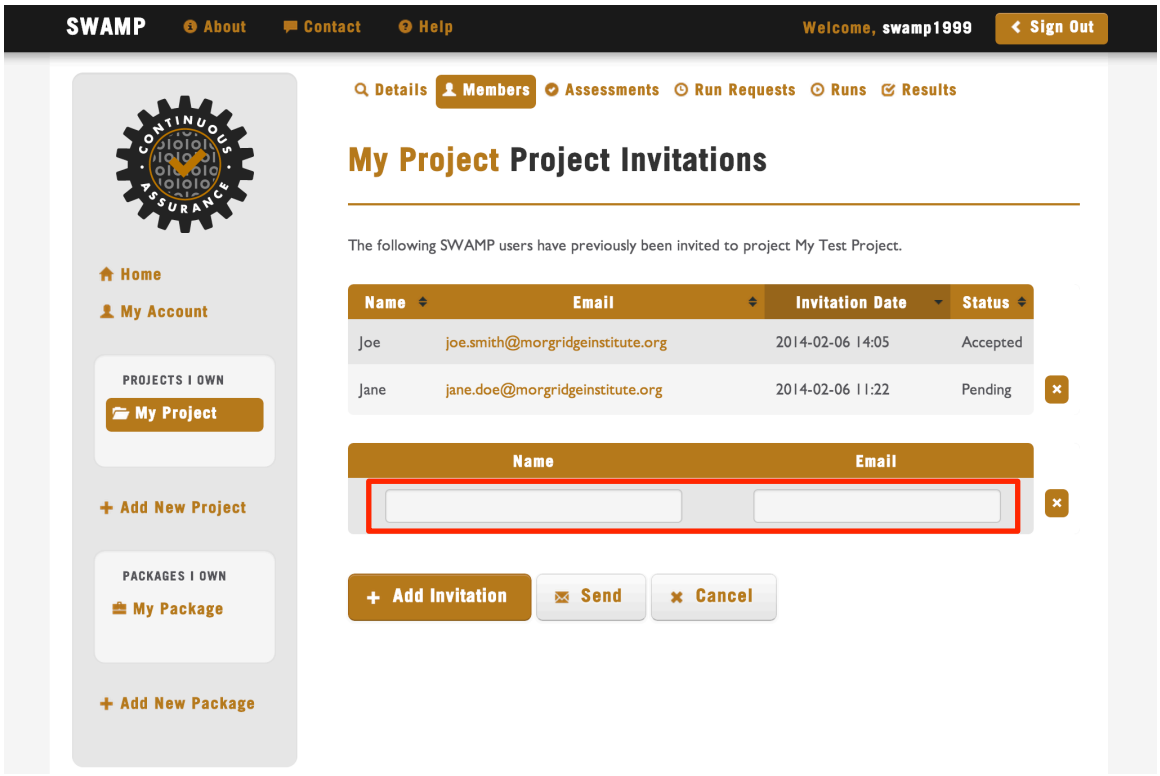
6. From the Project Invitations screen, select **Add Invitation**.

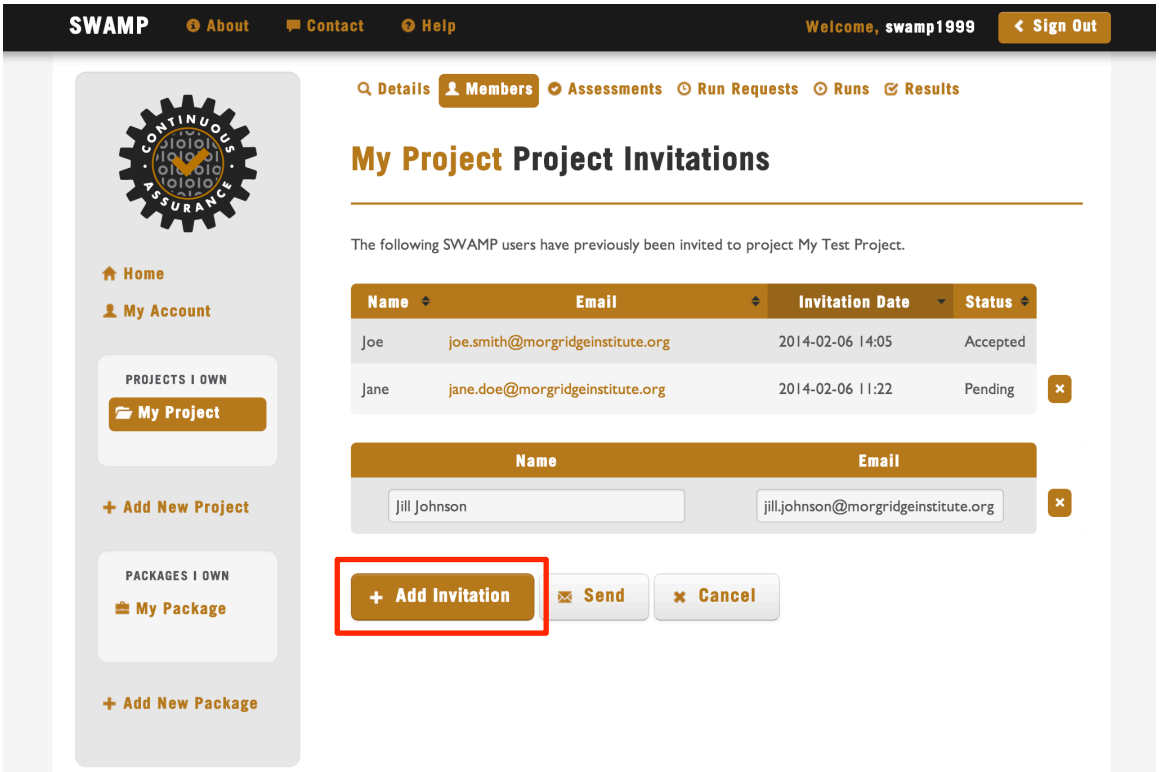


7. Type the name and email of the person you are inviting.

8. Continue to Add invitations for any others for whom you want to join your Project. Individuals do not have to be registered users of the SWAMP to be invited, but must register if they are going to be a part of the project.

9. Select **Send**.





10. You will receive a notification that invitations have successfully been sent to all new persons invited to join your Project.

Changing Project Member Status

A **Project Owner** may change the status of a **Project Member(s)** by navigating to the Members tab at the top of the page. A **Project Owner** may change a **Project Member's** status to **Admin** (Administrator) or remove the **Project Member** entirely from the project. **Admin** rights give a **Project Member** the additional capability to approve and invite new **Project Members**.

1. Select your **Project** under the **Projects I Own** tab in the left sidebar.

2. Select the **Members** tab at the top of the page

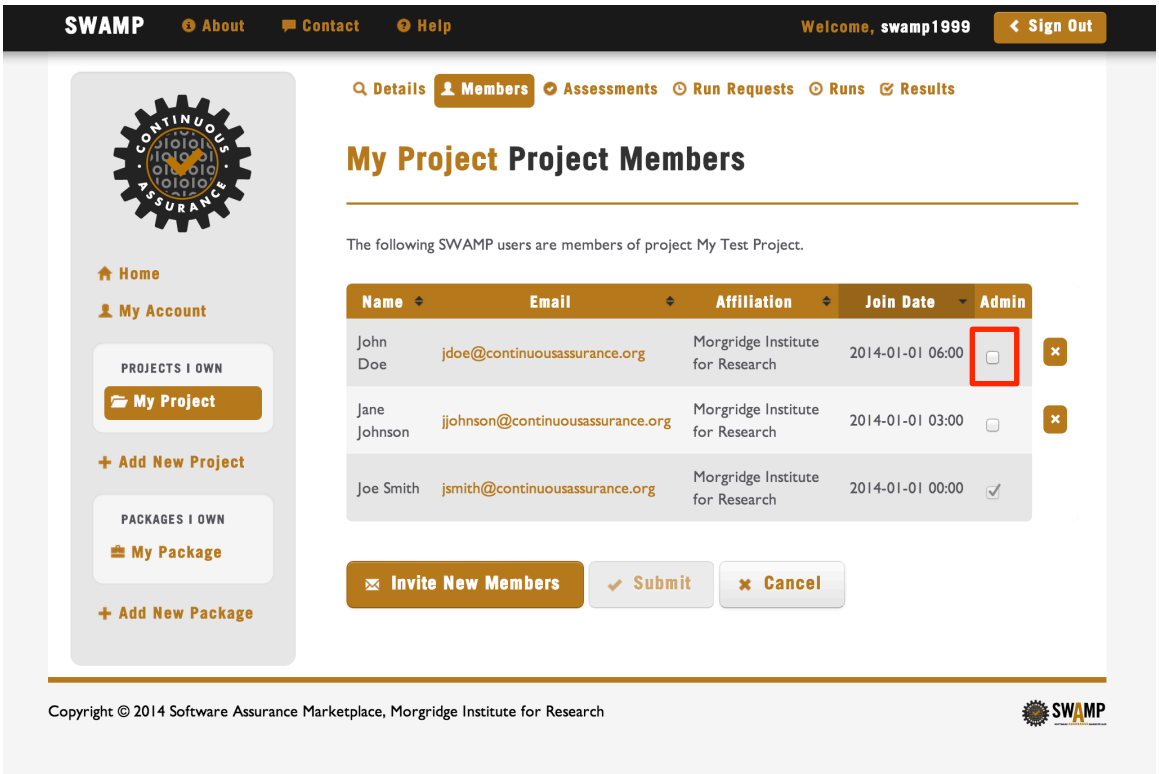
3. Select the checkbox under the **Status** column for **Project Member(s)** you wish to give **Admin** rights.

****Note:** *To remove a Project Member from the Project, the Project Member cannot have Admin rights.*

Removing Admin (Administrator) Rights

As the needs of your **Project** change, you can add/remove Admin rights from individual Project Members. Remove Admin rights for the Project Member(s) by following the steps below.

1. Deselect the checkbox under the Admin column.
2. Select Submit
3. An X will appear next to Admin column for each Project Member that does not have Admin rights.
4. Select the X next to the Admin column to remove the Project Member from the Project.



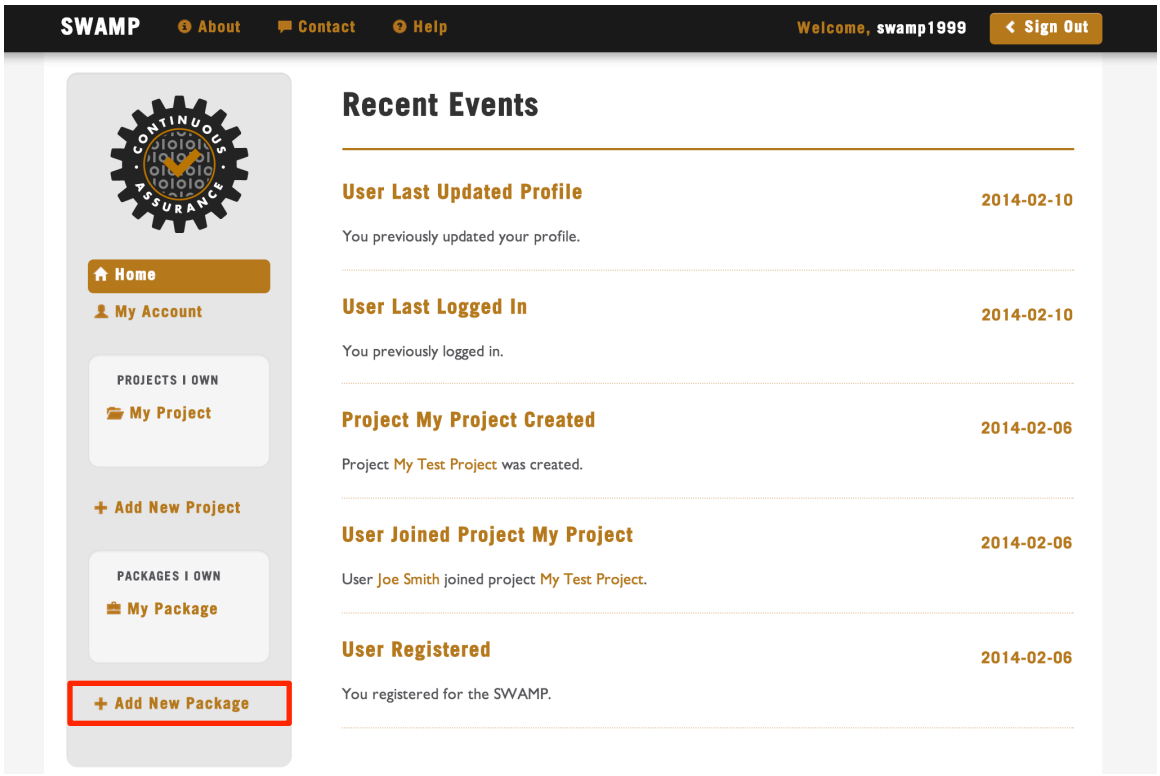
Part 3: Software Packages

Adding Your Software Package to the SWAMP

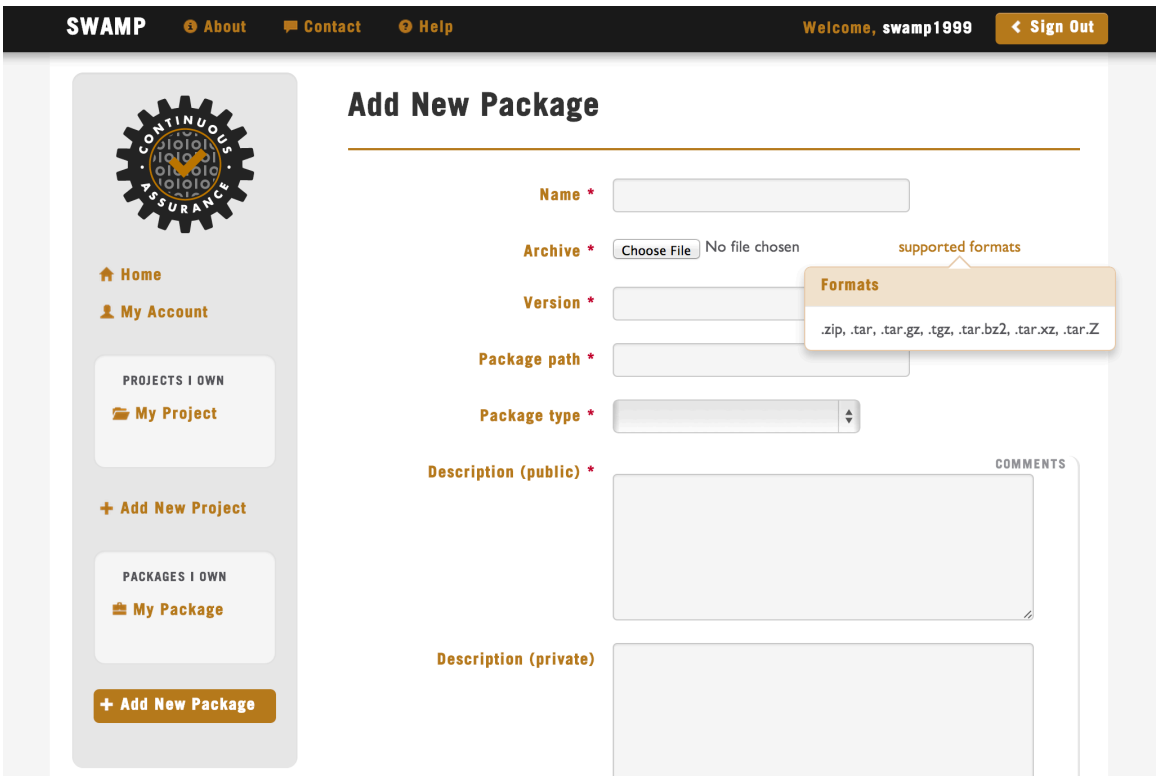
You may add and upload, edit or delete your Software Packages. A Software Package is a set of files containing related software or source code that needs to be assessed for vulnerabilities or insecurities.

Upload a Software Package

1. To add your own Software Package, select **Add New Package**.



2. Complete the fields on the form.



Name: Name of the Software Package.

Version: Revision of the uploaded software

Archive: Software Package to upload.

Build script: Script to run to build the package.

Package path: A required field and is the name of the top level directory that is produced when the archive file is unarchived.

Package type: This tells whether or not to invoke the build system to build the software from source code. From the dropdown menu choose C/C++, Java source code, or Java byte code.

Build system: Name of the system to use to build the software. For C/C++, Make, Make+Configure, CMake+Make or other may be used. For Java source, Ant, Ant+Ivy or Maven could be chosen.

Advanced settings

Configure path: The name of the directory relative to package-dir to change before running the configure command and is used only with C/C++ packages. *This is an optional field.*

Configure command: The name of a command to configure the package before building. If undefined/empty, no command is run. This is only used for C/C++ packages. *This is an optional field.*

Configure options: The name of options i.e. the arguments to pass to the configure command and is used only with C/C++. *This is an optional field.*

Build path: It is the path to the directory related to the source path to change to before building. *This is an optional field and is used for C/C++/Java*.

Build file: Used only with C/C++/Java source packages. It is the path to the build file related to the build path to use for the build systems except for the "Other" build command. For a build system type "Other", the name of the file needs to be passed in the build options. This is only used with C/C++/Java source packages. *This is an optional field.*

Build command: If a build system other than the ones listed above has to be used, "Other" from the build system menu has to be selected and a build command to execute the package needs to be provided. This is optional and is used only C/C++ packages.

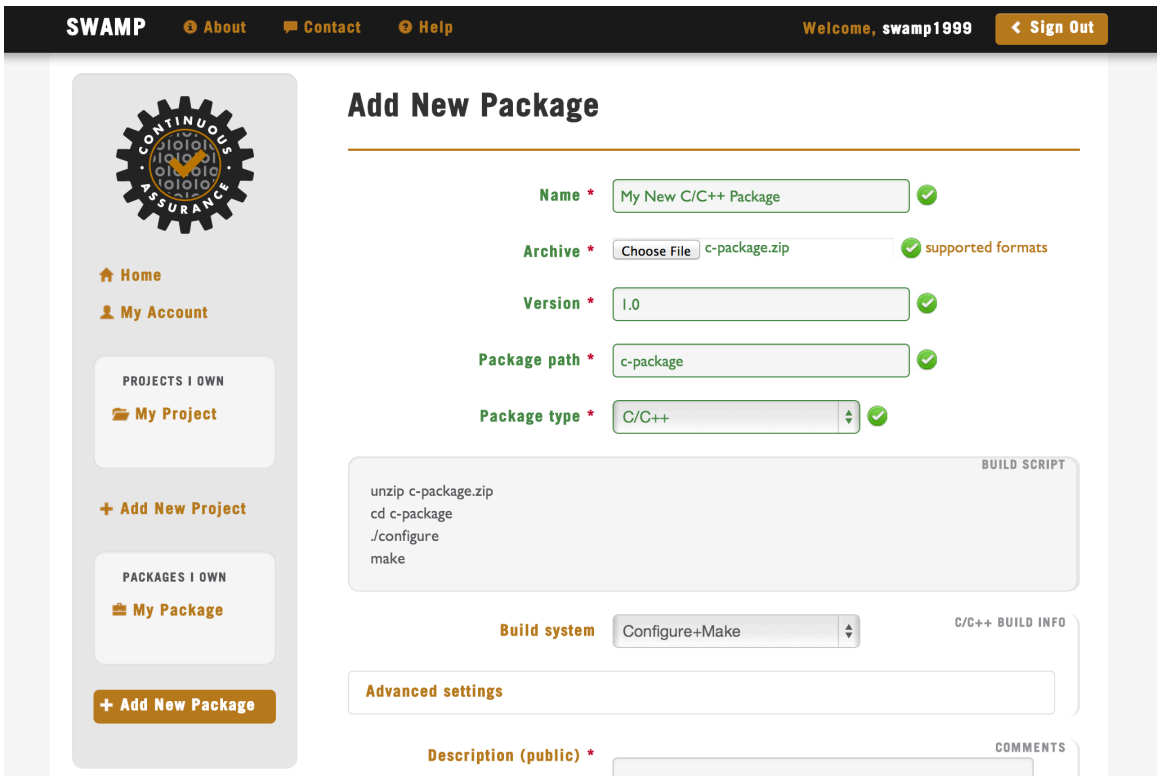
Build options: Name of the options and arguments to pass to the build command. Only for C/C++/Java source packages. *This is an optional field.*

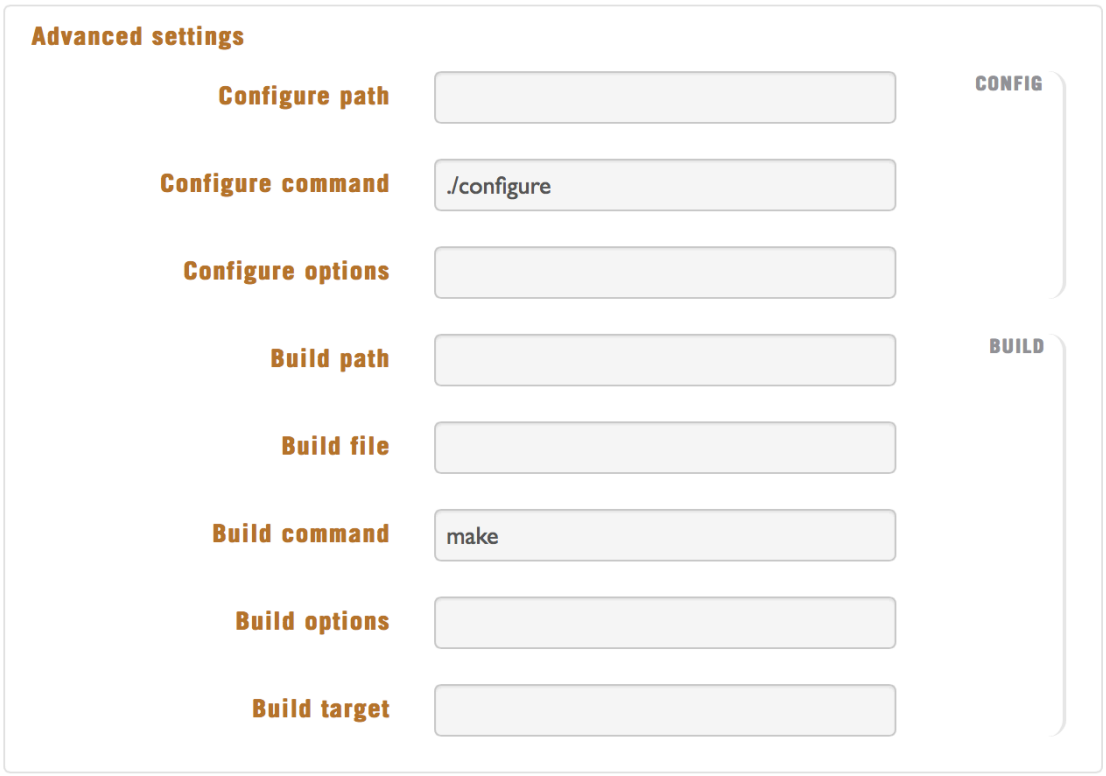
Build target: The name of the file to be created by the build process. This target is passed to the build command. It is used only with C/C++/Java source. *This is an optional field.*

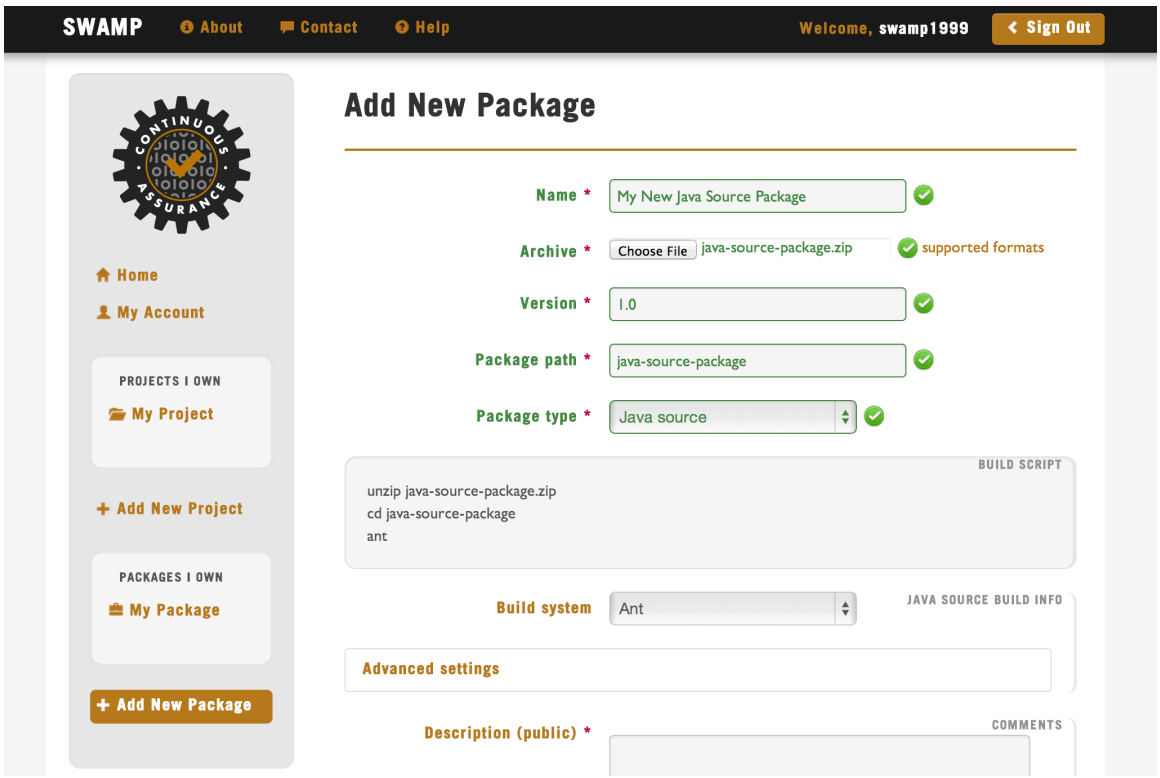
Description (public): A text description of the package that is visible to any user of the package.

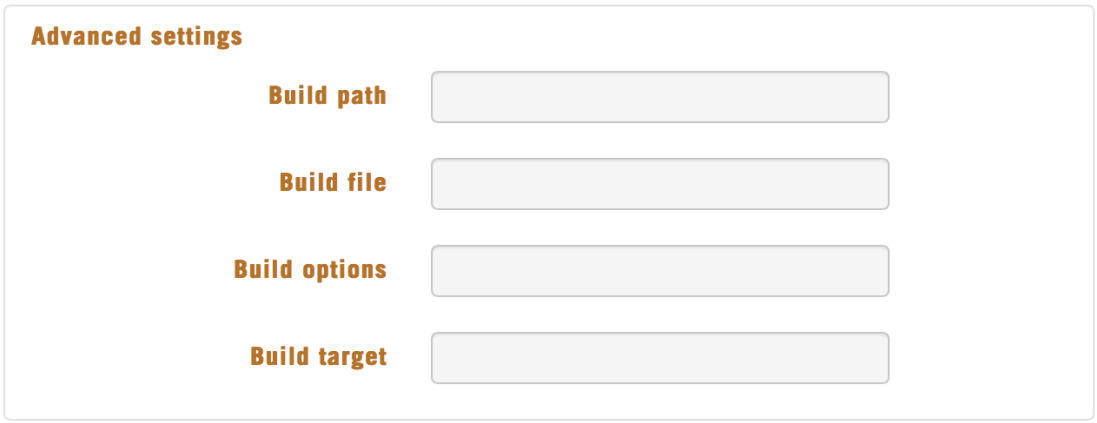
Description (private): A text description of the package that is only visible to the owner of the project.

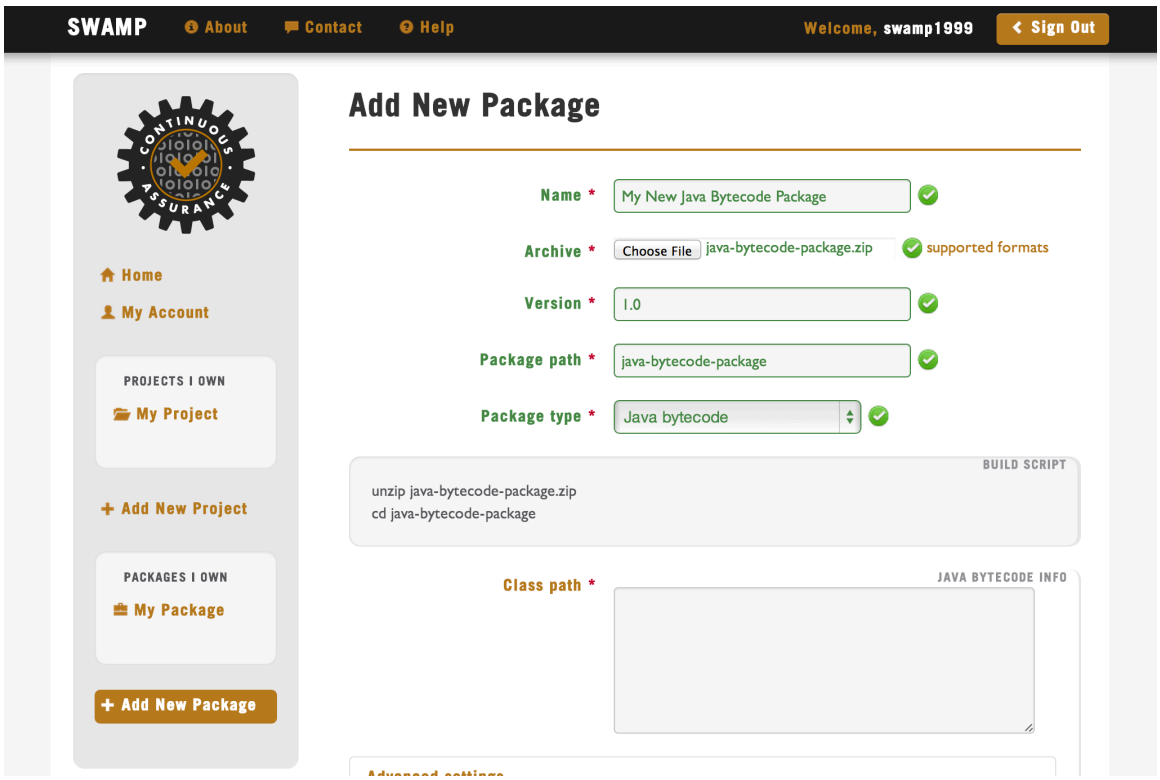
3. Select **Submit** to upload your Software Package. You will receive a notification once the upload is complete.


SWAMP
About
Contact
Help
Welcome, swamp1999
Sign Out
Home
My Account
PROJECTS I OWN
My Project
Add New Project
PACKAGES I OWN
My Package
Add New Package
Add New Package
Name *
My New C/C++ Package
Archive *
Choose File
c-package.zip
supported formats
Version *
1.0
Package path *
c-package
Package type *
C/C++
BUILD SCRIPT
unzip c-package.zip
cd c-package
./configure
make
Build system
Configure+Make
C/C++ BUILD INFO
Advanced settings
Description (public) *
COMMENTS


Advanced settings
Configure path
CONFIG
Configure command
./configure
Configure options
Build path
BUILD
Build file
Build command
make
Build options
Build target

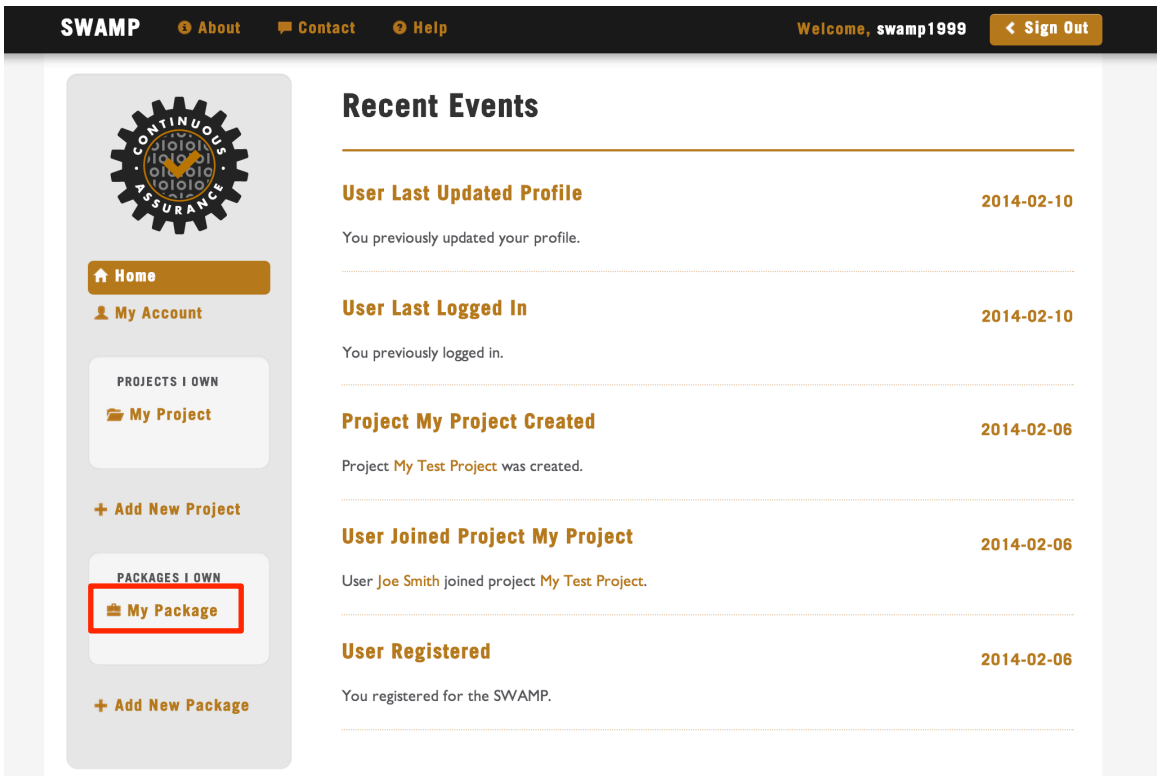

SWAMP
About
Contact
Help
Welcome, swamp1999
Sign Out
Home
My Account
PROJECTS I OWN
My Project
Add New Project
PACKAGES I OWN
My Package
Add New Package
Add New Package
Name *
My New Java Source Package
Archive *
Choose File
java-source-package.zip
supported formats
Version *
1.0
Package path *
java-source-package
Package type *
Java source
BUILD SCRIPT
unzip java-source-package.zip
cd java-source-package
ant
Build system
Ant
JAVA SOURCE BUILD INFO
Advanced settings
Description (public) *
COMMENTS


Advanced settings
Build path
Build file
Build options
Build target

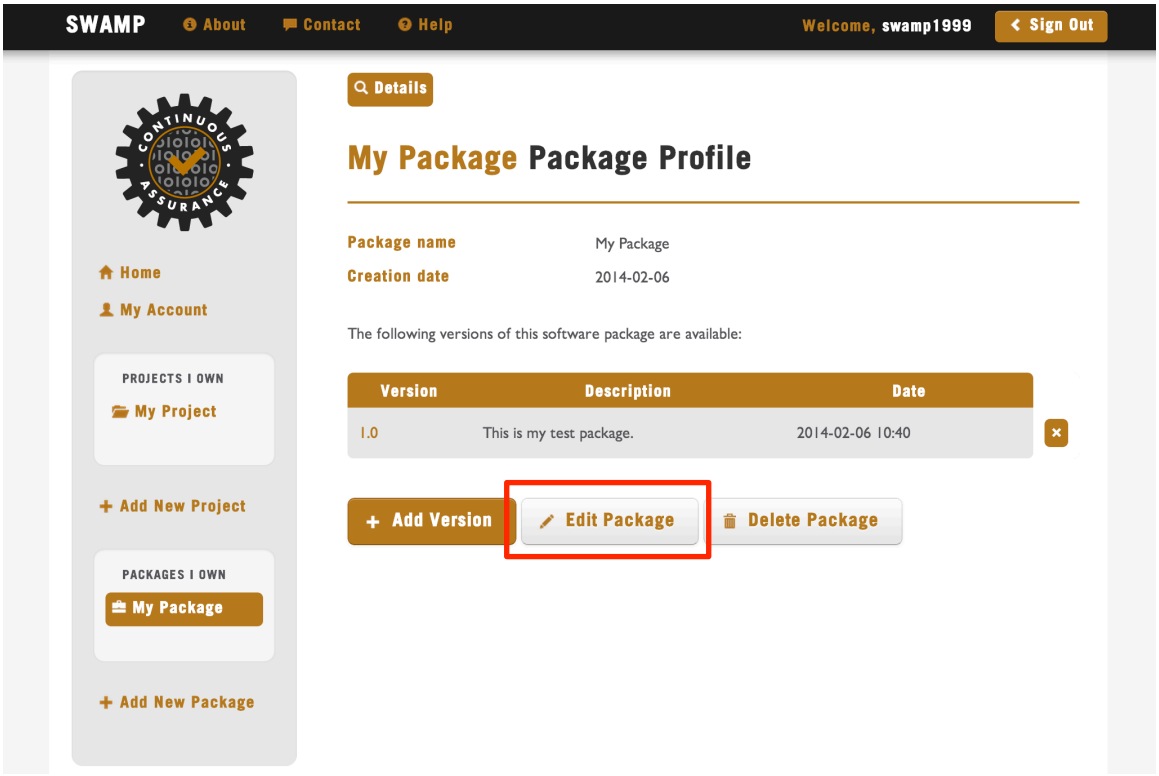


Edit a Software Package

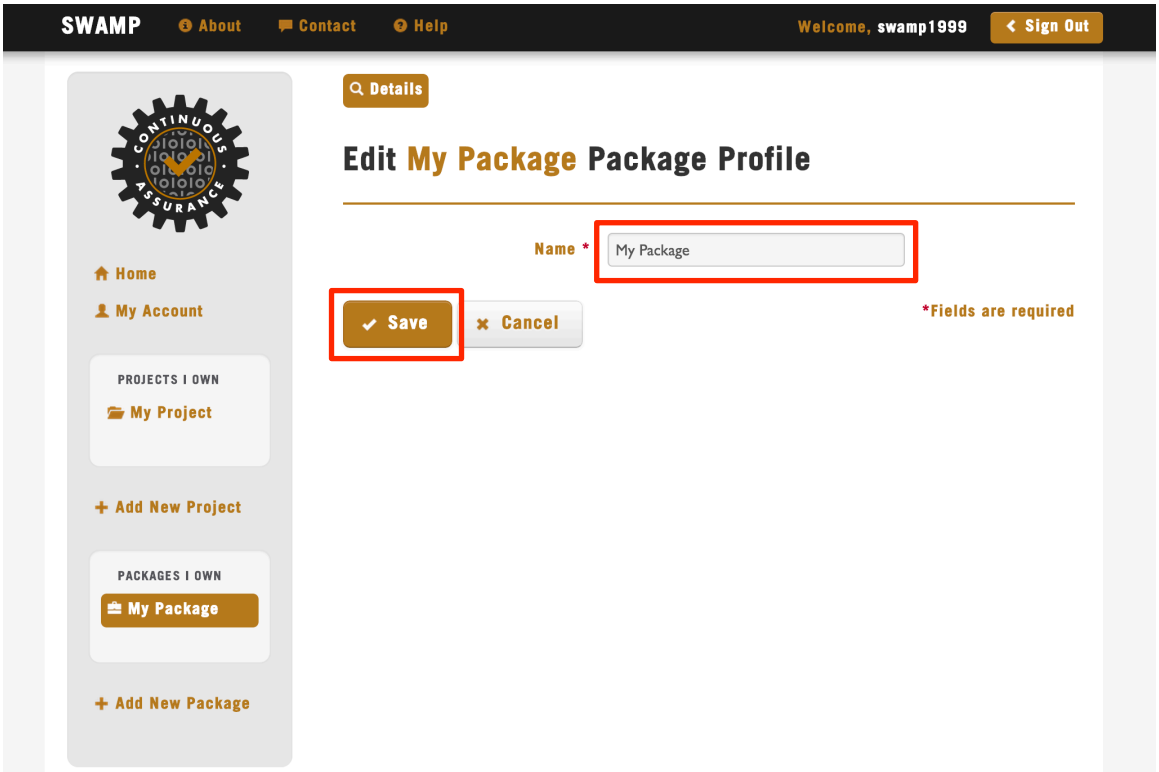
1. From the **Home** screen select a Software Package to edit.


SWAMP
About
Contact
Help
Welcome, swamp1999
Sign Out
Home
My Account
PROJECTS I OWN
My Project
Add New Project
PACKAGES I OWN
My Package
Add New Package
Recent Events
User Last Updated Profile
2014-02-10
You previously updated your profile.
User Last Logged In
2014-02-10
You previously logged in.
Project My Project Created
2014-02-06
Project My Test Project was created.
User Joined Project My Project
2014-02-06
User Joe Smith joined project My Test Project.
User Registered
2014-02-06
You registered for the SWAMP.

2. On the **Package Profile** screen Select **Edit Package**.



3. From this screen you can change the name of the Software Package. Type the revised name of the Software Package and select **Save**.



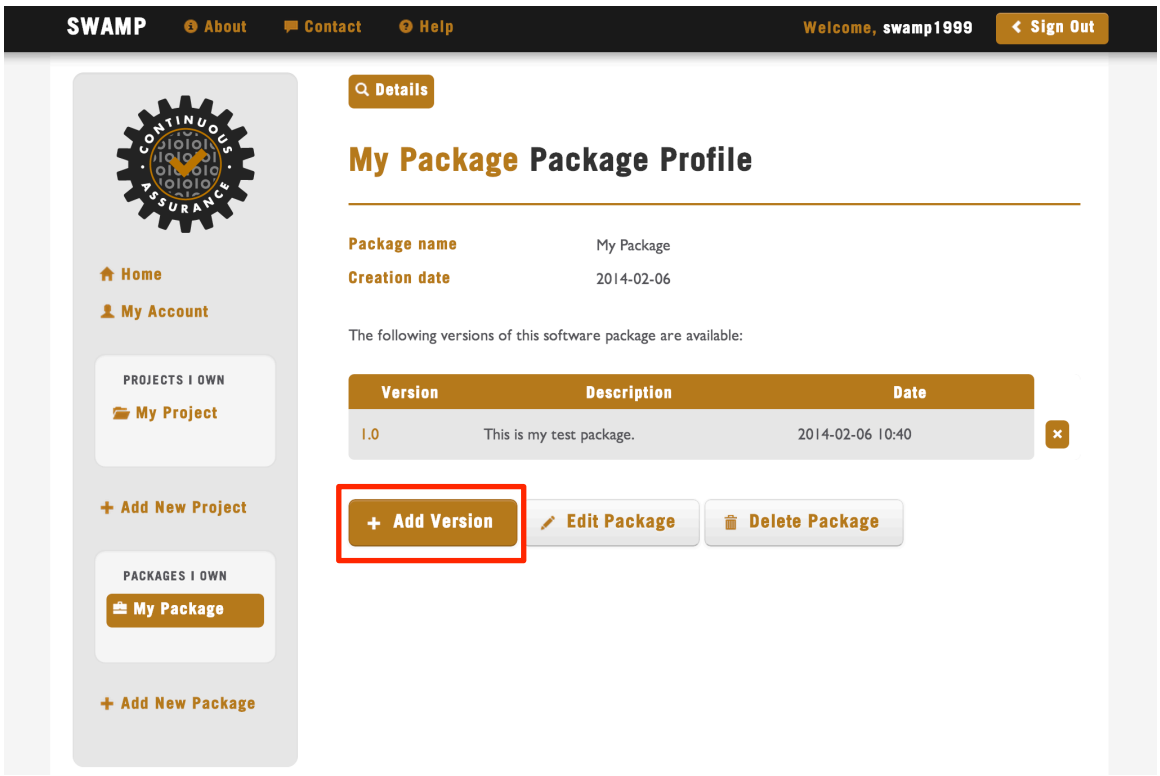
4. You will receive confirmation of the change. Select **OK**.

Adding, Updating or Deleting a Software Package Version

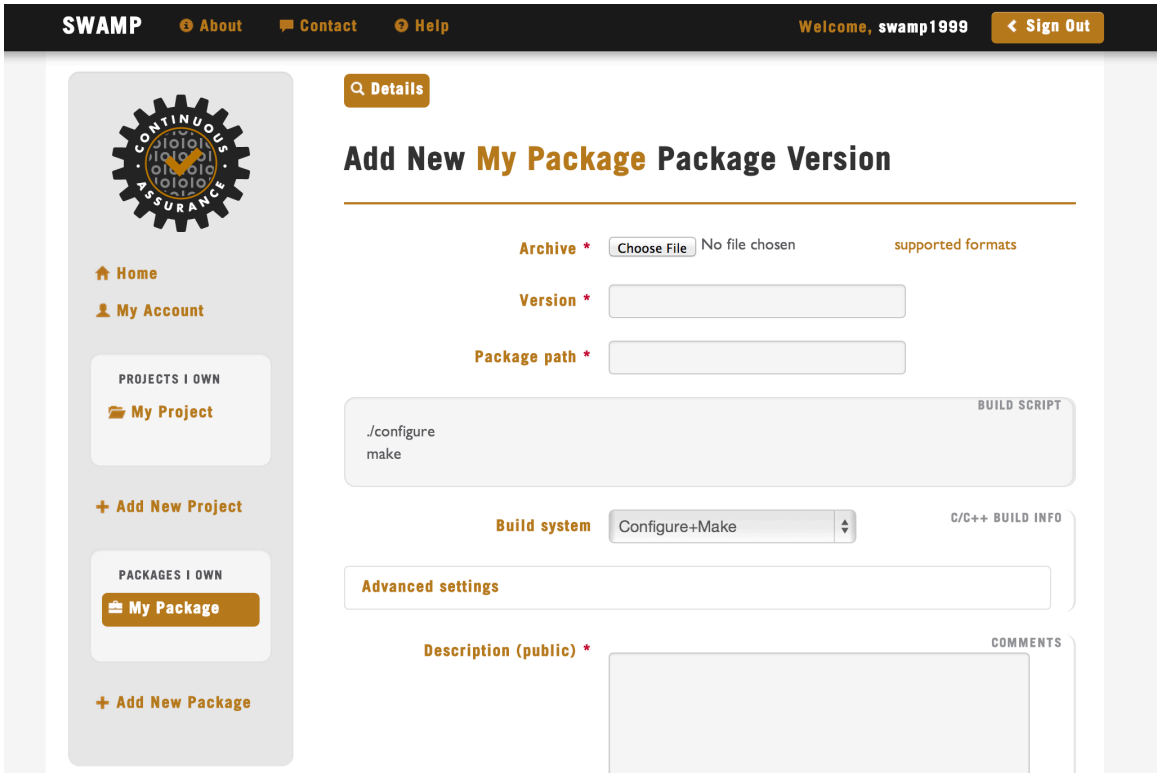
View or Add a Version of a Software Package

From the **Packages I Own** tab in the left side bar you can view your Software Package or add a new version of your Software Package.

1. Select the software package you wish to update, and then select **Add Version**.



2. From the **Add New Version** screen complete the fields on the form.



Archive: Software Package to upload.

Version: Revision of the uploaded software

Build script: Script to run to build the package.

Package path: A required field and is the name of the top level directory that is produced when the archive file is unarchived.

Package type: This tells whether or not to invoke the build system to build the software from source code. From the dropdown menu choose C/C++, Java source code, or Java byte code.

Build system: Name of the system to use to build the software. For C/C++, Make, Make+Configure, CMake+Make or other may be used. For Java source, Ant, Ant+Ivy or Maven could be chosen.

Advanced settings

Configure path: The name of the directory relative to package-dir to change before running the configure command and is used only with C/C++ packages. *This is an optional field.*

Configure command: The name of a command to configure the package before building. If undefined/empty, no command is run. This is only used for C/C++ packages. *This is an optional field.*

Configure options: The name of options i.e. the arguments to pass to the configure command and is used only with C/C++. *This is an optional field.*

Build path: It is the path to the directory related to the source path to change to before building. *This is an optional field and is used for C/C++/Java*.

Build file: Used only with C/C++/Java source packages. It is the path to the build file related to the build path to use for the build systems except for the “Other” build command. For a build system type “Other”, the name of the file needs to be passed in the build options. This is only used with C/C++/Java source packages. *This is an optional field.*

Build command: If a build system other than the ones listed above has to be used, “Other” from the build system menu has to be selected and a build command to execute the package

needs to be provided. This is optional and is used only C/C++ packages.

Build options: Name of the options and arguments to pass to the build command. Only for C/C++/Java source packages. *This is an optional field.*

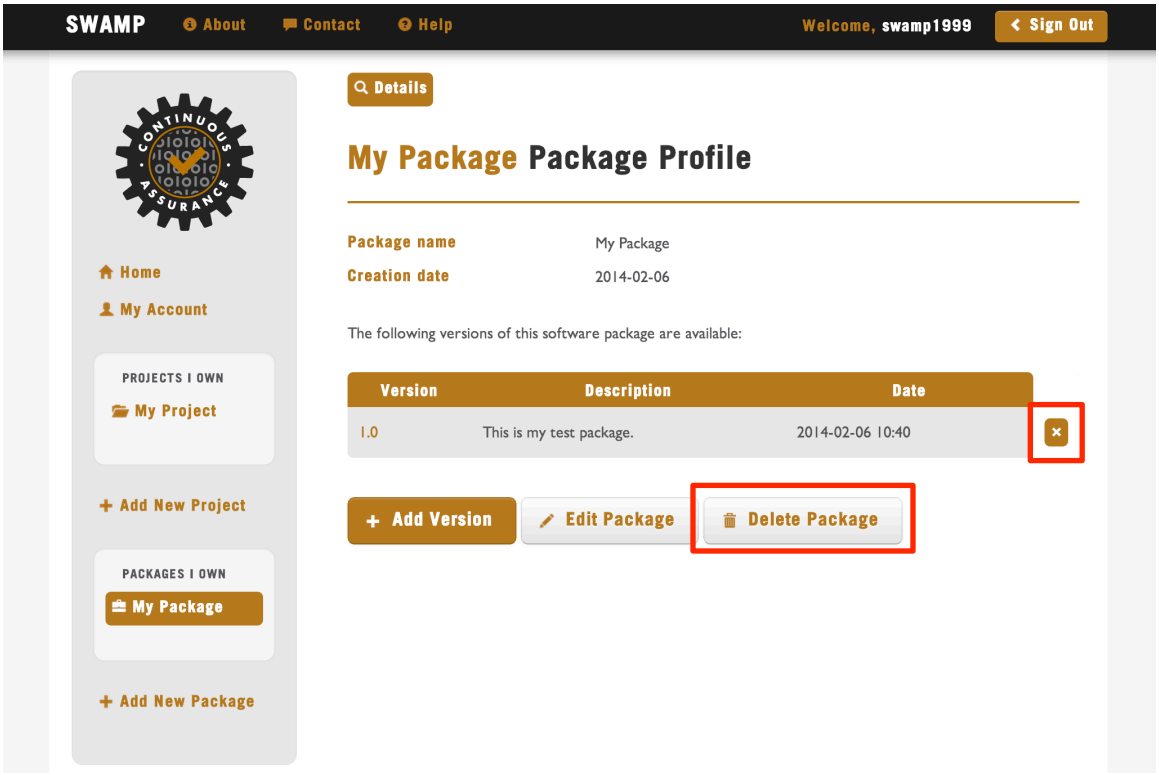
Build target: The name of the file to be created by the build process. This target is passed to the build command. It is used only with C/C++/Java source. *This is an optional field.*

Description (public): A text description of the package that is visible to any user of the package.

Description (private): A text description of the package that is only visible to the owner of the project.

Deleting a Software Package

1. To delete a Software Package, navigate to the **Package Versions** screen. Select the **X** next to the version you wish to delete.



2. You will receive a prompt asking you to confirm the deletion. Select **OK** to delete or **Cancel** to cancel your request.

Software Package Sharing: Private, Public, or Protected

You can share your Software Packages in one of three modes:

- Private
- Public
- Protected

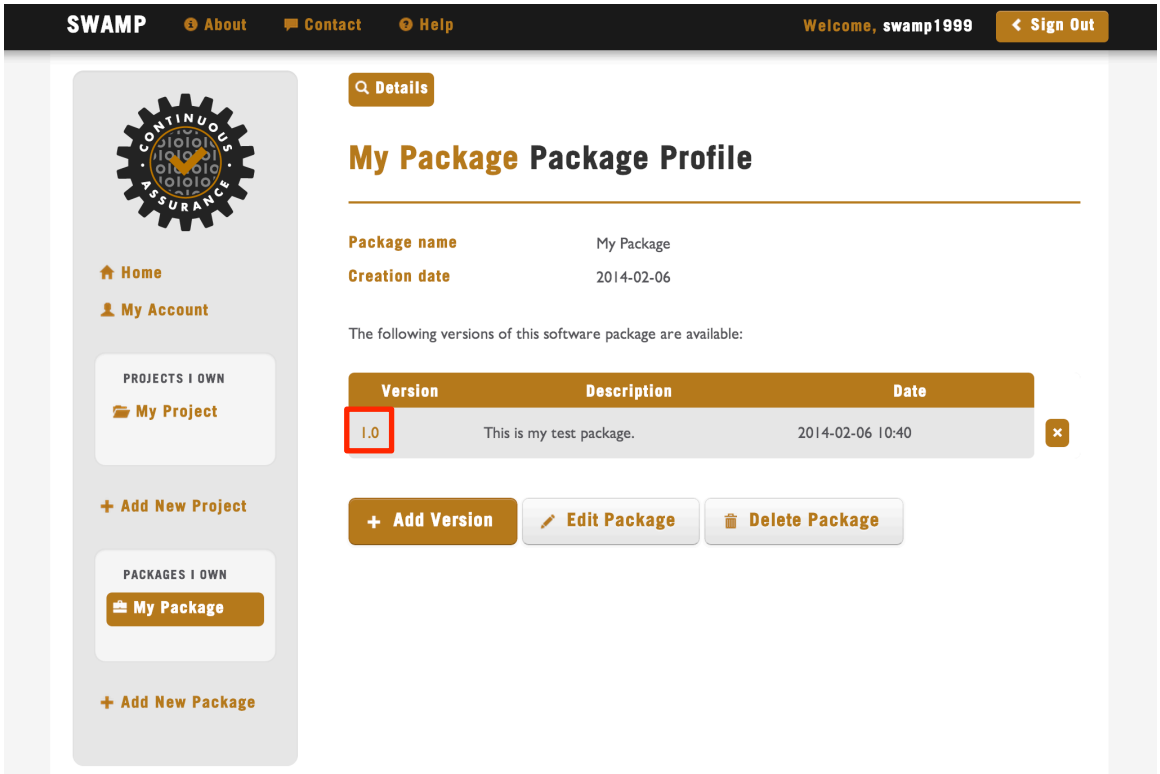
Private: Only the Project Owner can see Software Packages.

Public: Every SWAMP user can see Software Packages.

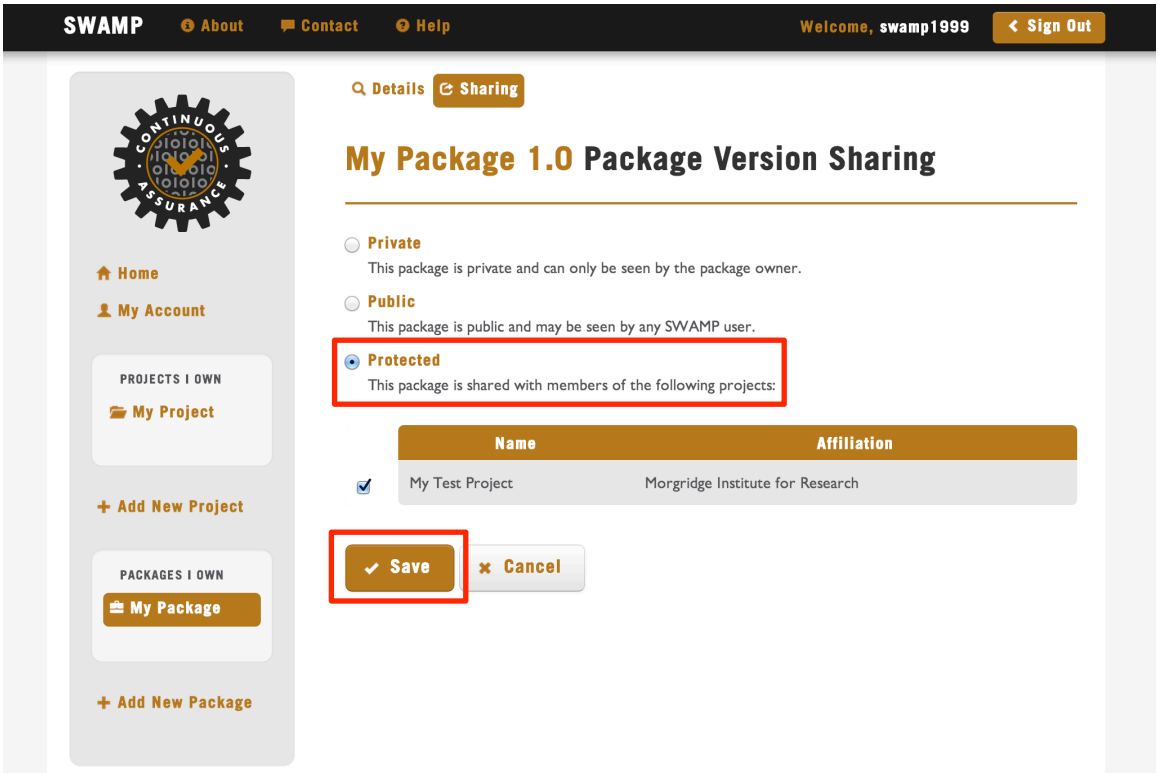
Protected: Project Owners can choose to share Software Packages with selected Projects and by default with members of the selected Project.

1. Navigate to the **Package Profile** screen.

2. Select the Software Package version you wish to link with the project you have chosen.



3. The **Package Sharing** screen appears.



4. Select the radio button to choose what level of access to the Software Package you wish to give SWAMP users. When choosing Protected, select the Projects with which you wish to share your Software Package.

5. Protected must be chosen to share your Software Package version with a Project.

6. Select **Save**.

Note: You do not have to be a Project Owner to upload a Package to the SWAMP.

Part 4: Assessments

Managing Assessment Runs

After an Assessment Run has been scheduled, the Assessment Run will proceed through three states listed below:

1. **SCHEDULED**: The Scheduled state happens after you create a Run Request for the Assessment Run.
2. **Starting virtual machine**: The system is setting up the environment for the Assessment Run.
3. **Submitted to HTCondor**: The Assessment Run job has been submitted to HTCondor for execution.
4. **Performing Assessment**: The Assessment Run is being executed.
5. **Finished:** The scheduled Run Request has completed and Assessment Results are available.
6. **Finished with errors:** Your build has failed due to an incorrect Build System and/or incompatibilities between the Software Package and the selected Platform.
7. **Unable to run, queued** or **Unable to start VM:** There are incompatibilities between the chosen Platform and Software Package.

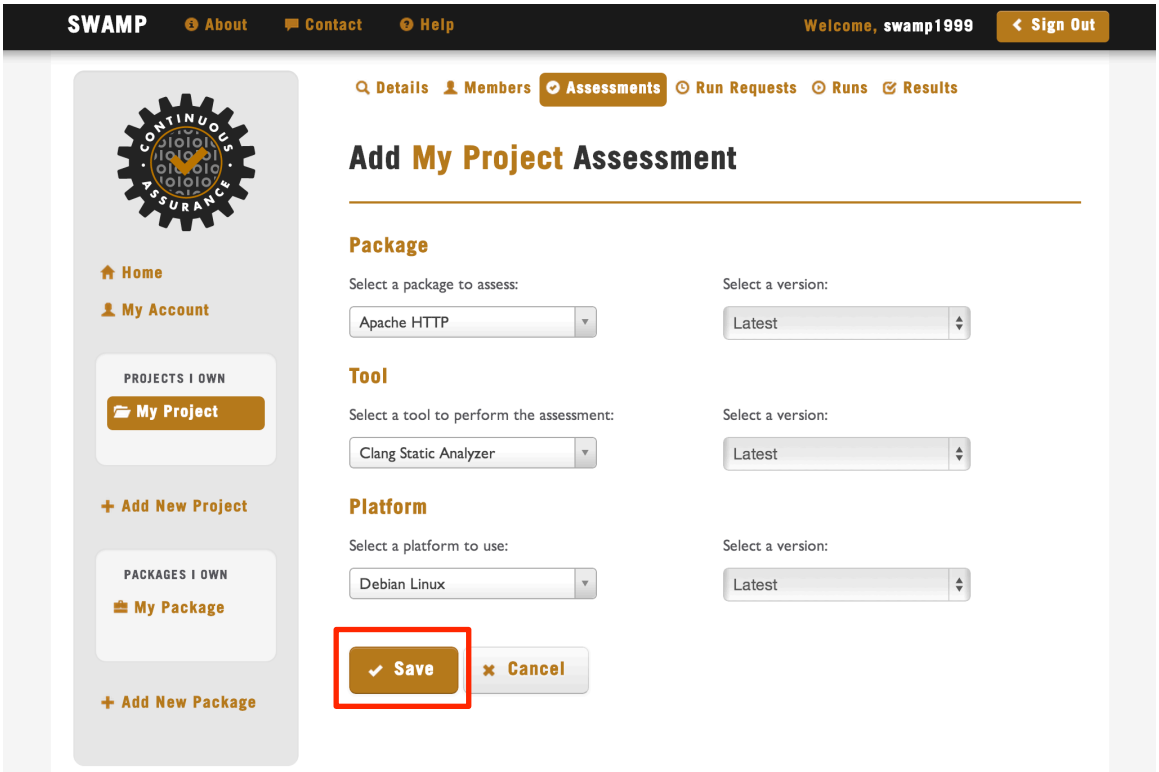
***Note:** You can view the details of each stage by selecting the current status under the **Status** field.*

Add an Assessment Run

1. Select **Add Assessment**. From each dropdown menu:

    1. Choose a Software Package and its version.
    2. Choose an Assessment Tool and its version.
    3. Choose a Platform and its version.

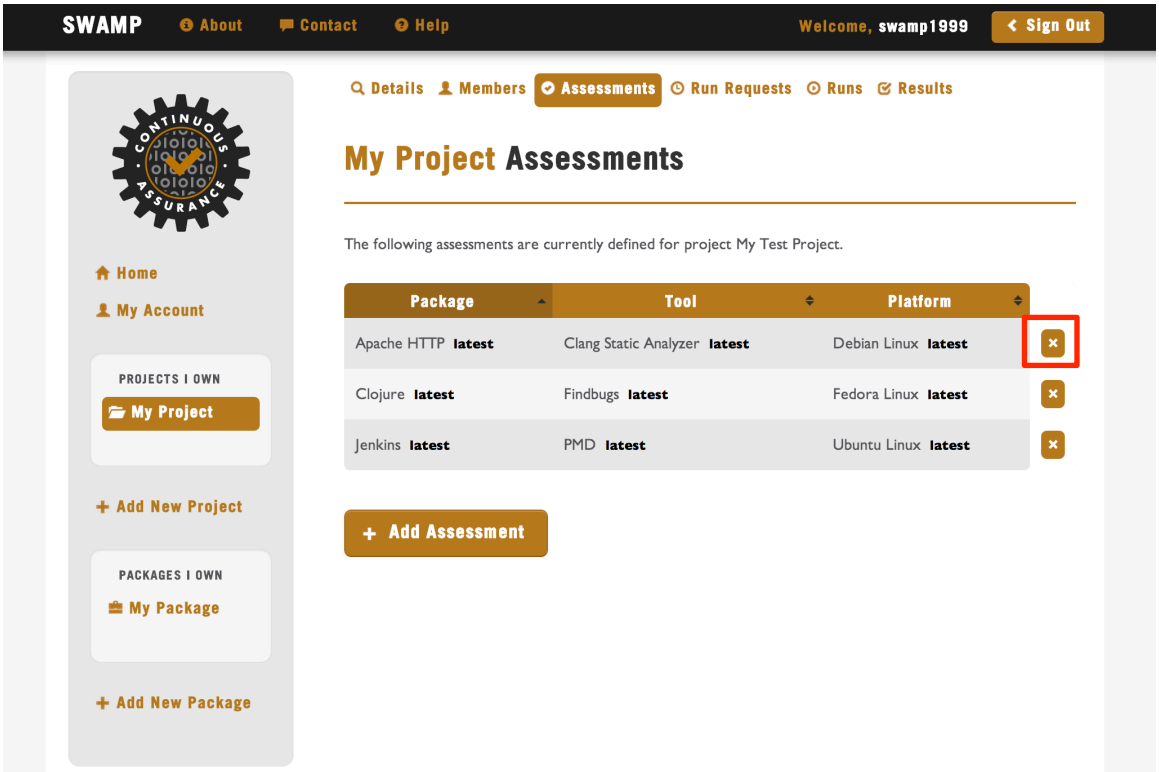
2. Select **Save**.



3. You will receive a confirmation message. Select **OK**.

Delete an Assessment Run

1. To delete an Assessment Run, navigate to the **Assessments** screen. Select the **X** to the right of the Assessment Run you wish to delete.

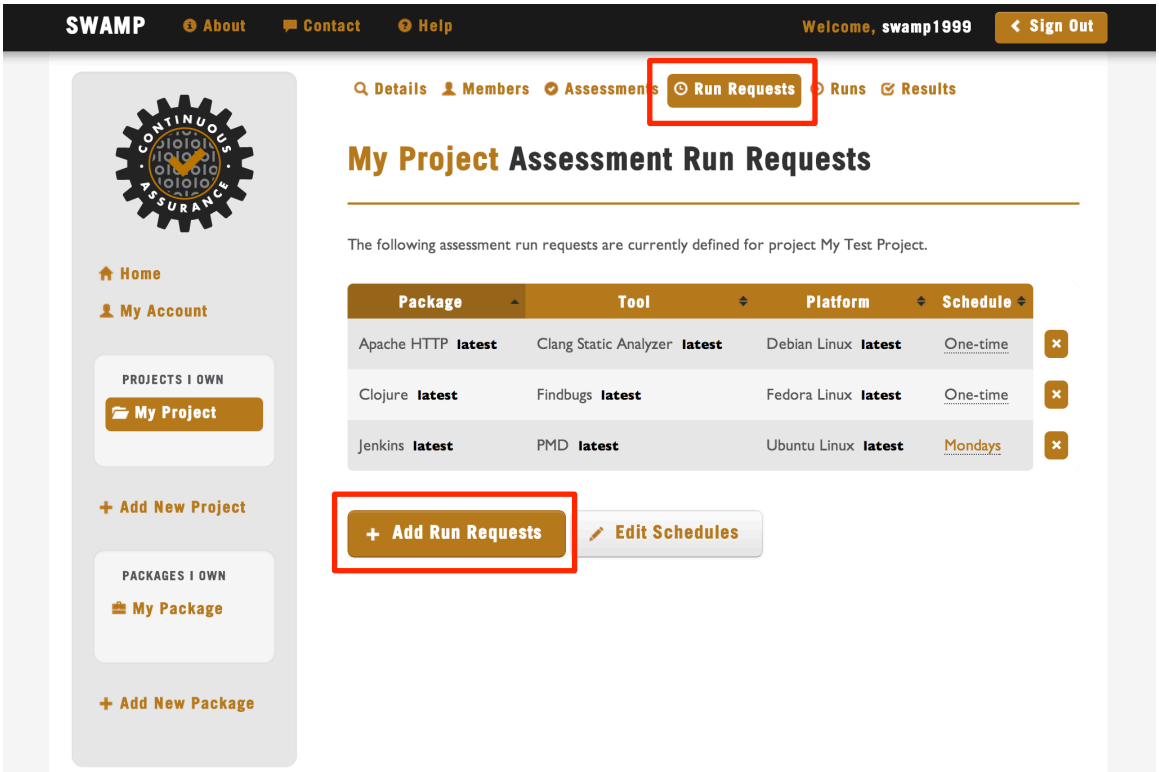


2. Select **OK** to confirm that you wish to delete the Assessment Run.

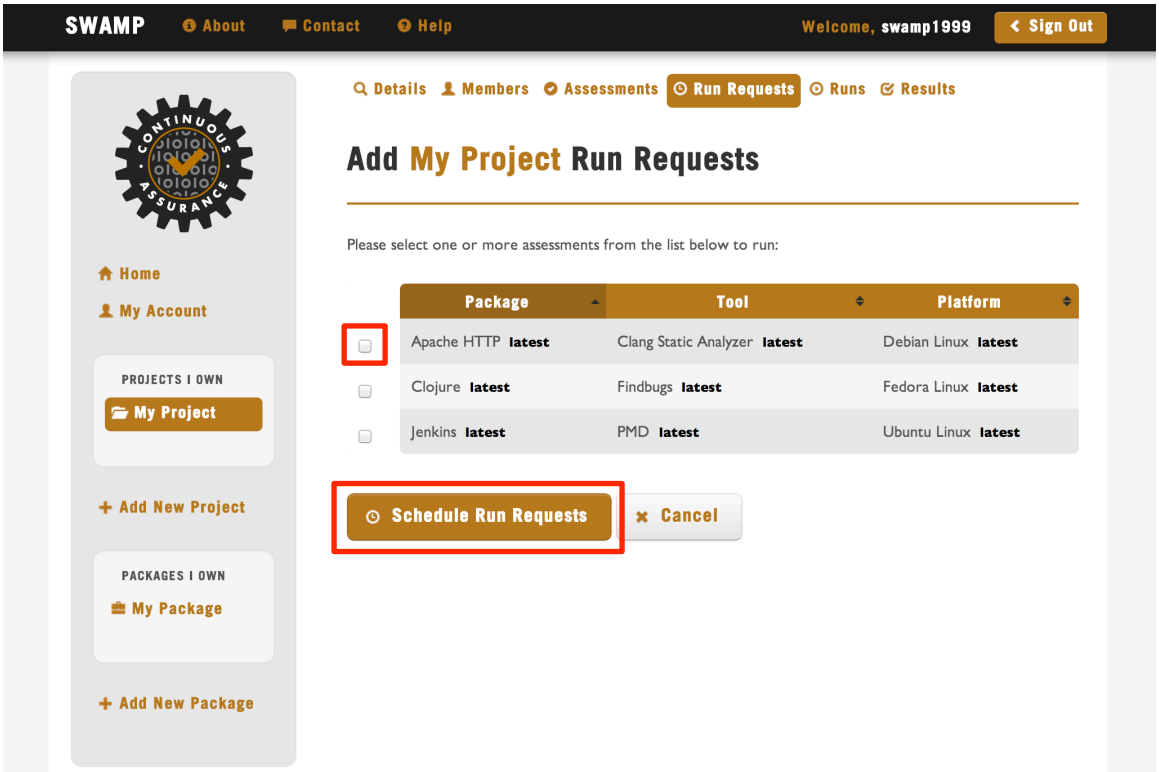
3. You will receive a confirmation that the Assessment Run has been deleted. Select **OK.**

Schedule a Run Request

1. Select the **Run Request** tab and then select **Add Run Requests**.



2. On the **Add Run Requests** screen, select the **checkbox** in front of the Run Request you wish to schedule, and then select **Schedule Run Requests**.



Run Request Scheduling Options

You can schedule Assessment Runs **One-time** or **On a repeated schedule**. Multiple runs can be scheduled simultaneously:

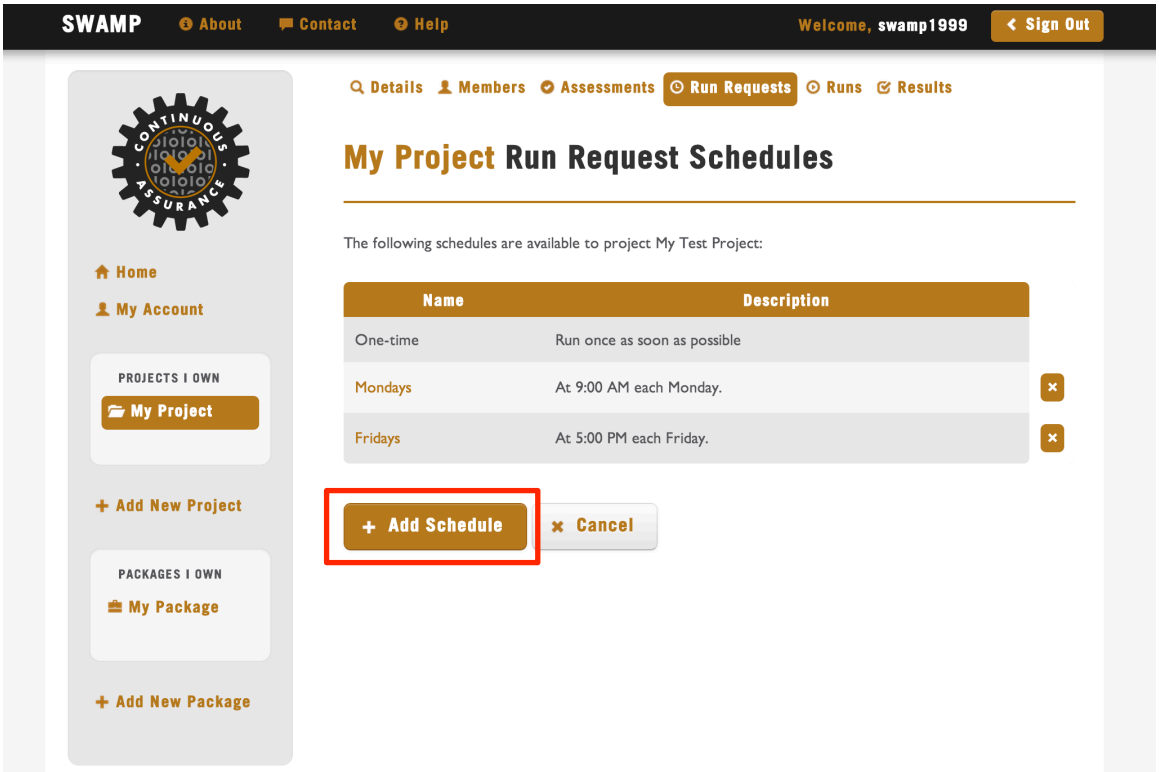
- **One-time:** A One-time Run Request assesses a selected Software Package only once.
- **On a repeated schedule:** With the repeated schedule option, the user could choose to schedule Assessment Runs on a regular basis such as daily, weekly or monthly at a selected time. This feature is helpful when the user edits the package regularly and wants to perform an Assessment Run with the same tool on the same platform every time the package is modified or updated.

One-time Runs

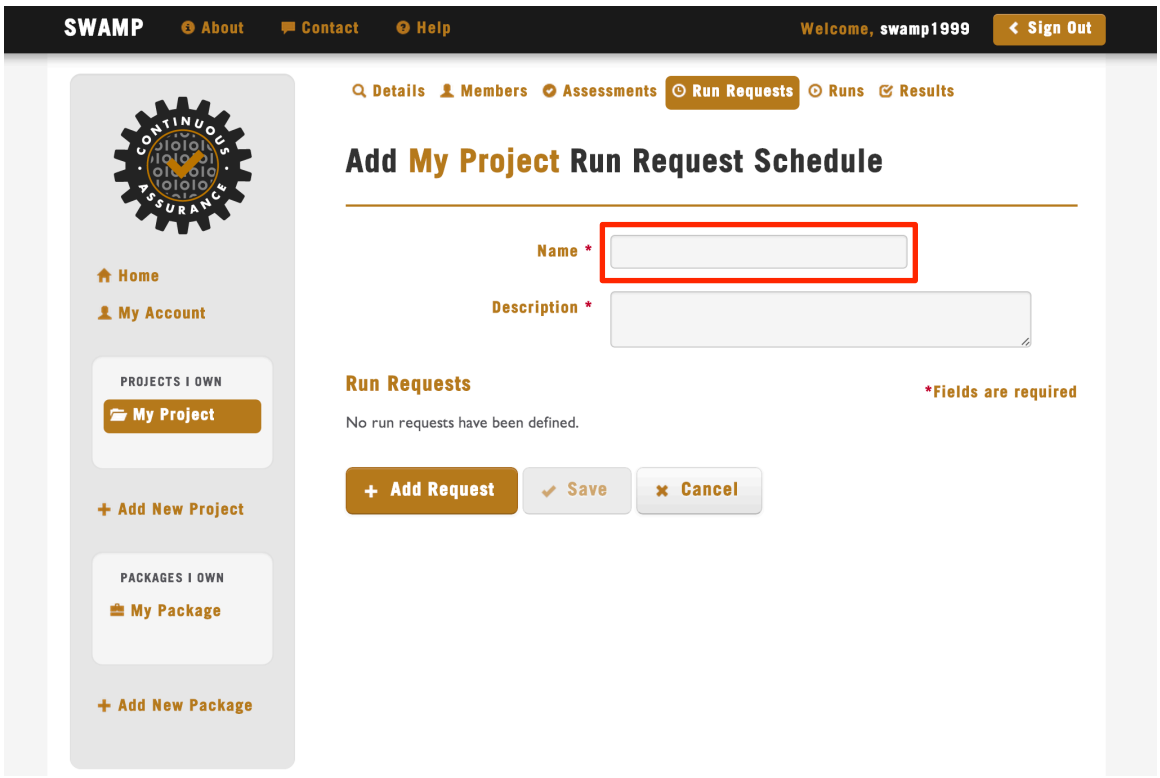
1. The schedule defaults to one-time on the **Schedule Run Request** screen.
2. If you want to schedule a recurrent Run Request, select **Edit Schedules**.
3. If you want to execute your Assessment Run as soon as possible, select **Submit**.

Adding a New Run Request

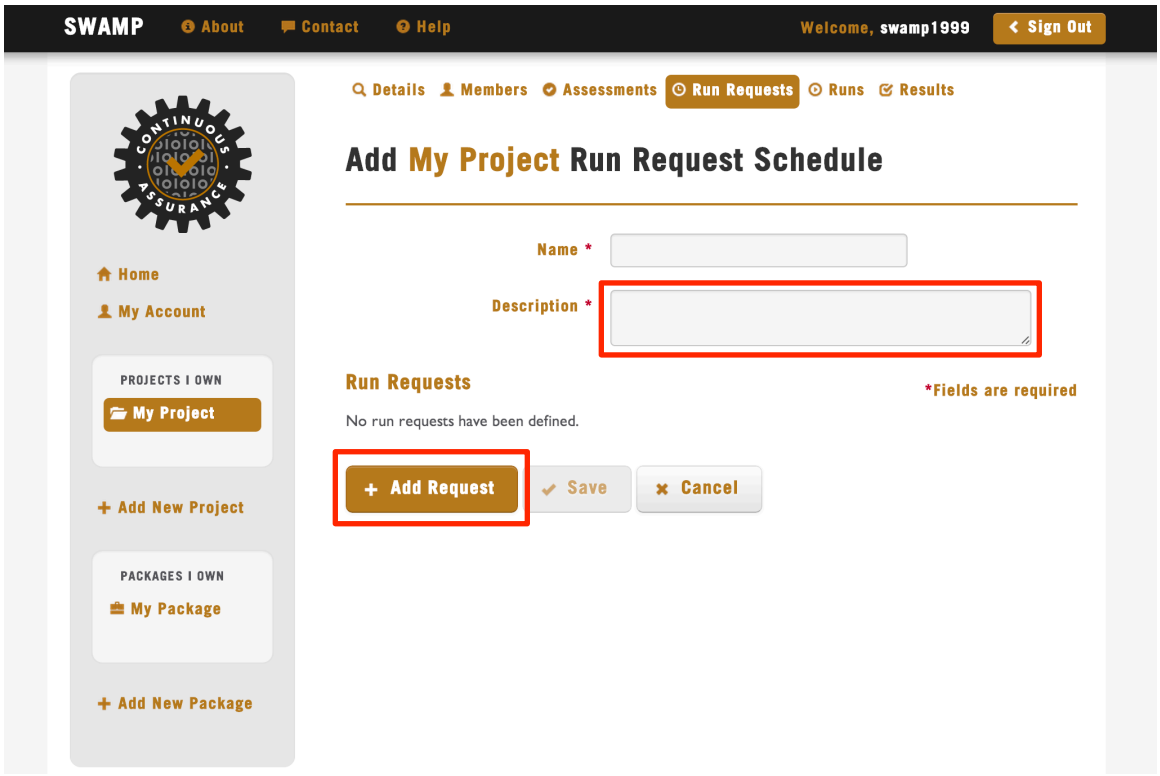
1. From the **Run Request** screen, select **Edit Schedules**.
2. Select **Add Schedule**



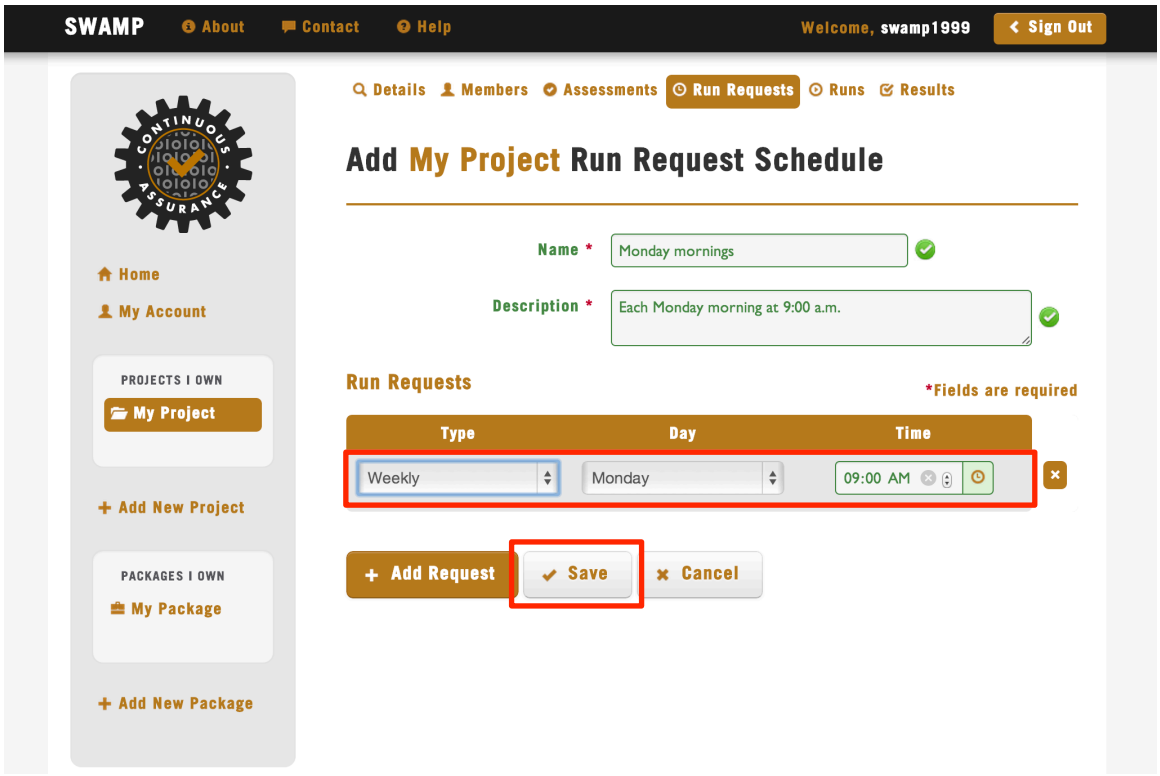
3. On the **Define Run Request Schedule** screen, type a name for your schedule. For example, “Tuesdays at 8 a.m.”



4. Type a description. For example, “Run the assessment every Tuesday at 8 a.m.”



5. Select **Add Request**.
6. In the **Type** dropdown menu select **Daily**, **Weekly**, or **Monthly**.
   - For Daily runs select the time.
   - For Weekly runs select the day and time.
   - For Monthly runs select the date and time.
7. Additional run times can be added to your Run Request schedule.

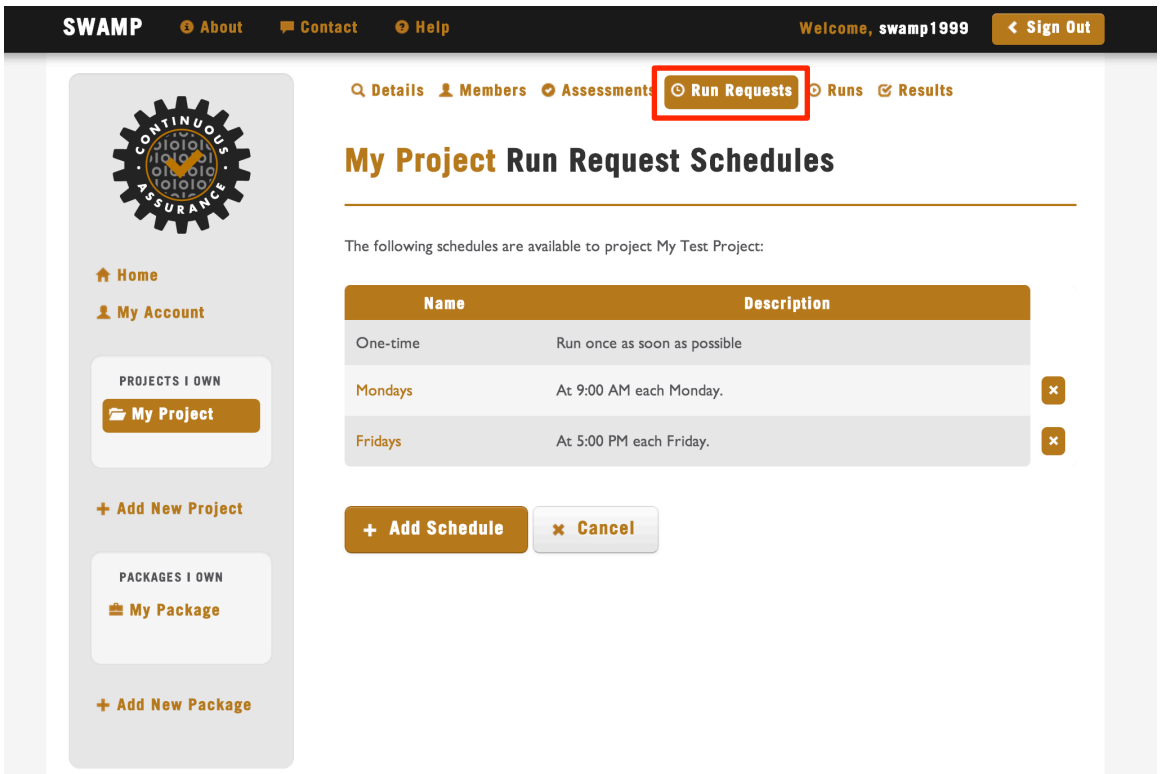


8. Select **Save**.

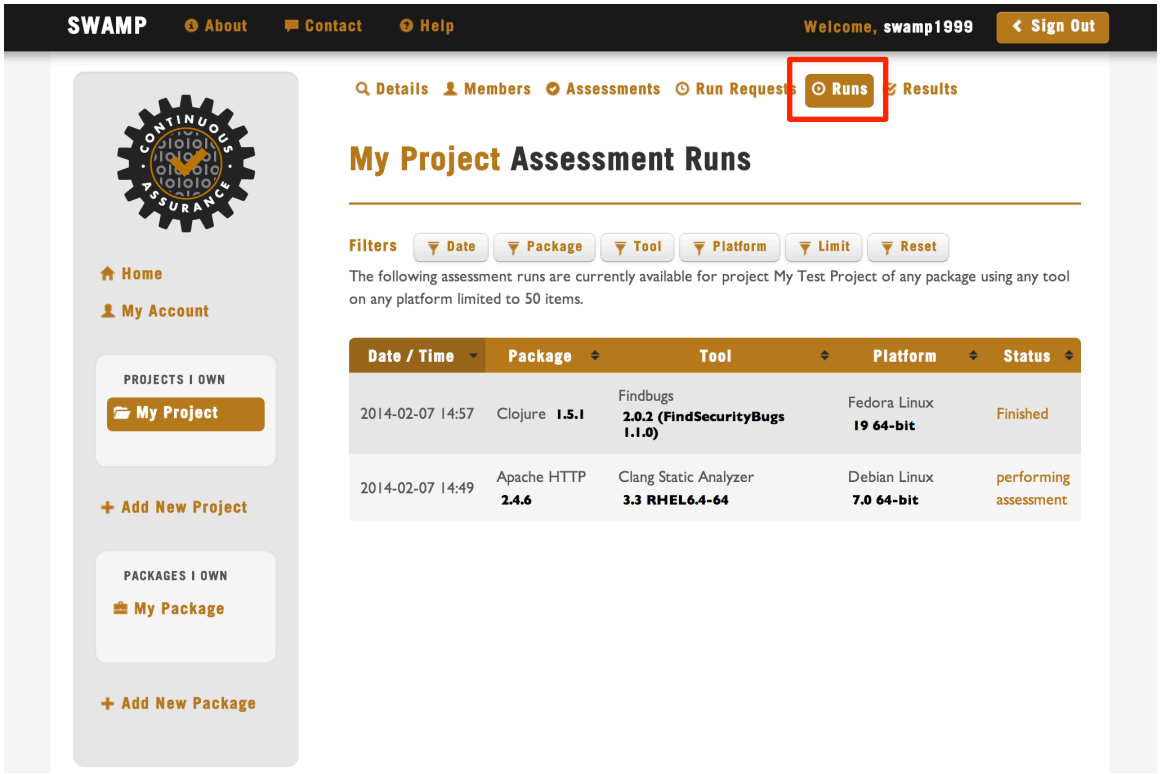
9. You will receive a confirmation message. Select **OK**.

Viewing Run Request Schedules and Results

1. View your scheduled runs on the **Run Request Schedules** screen.



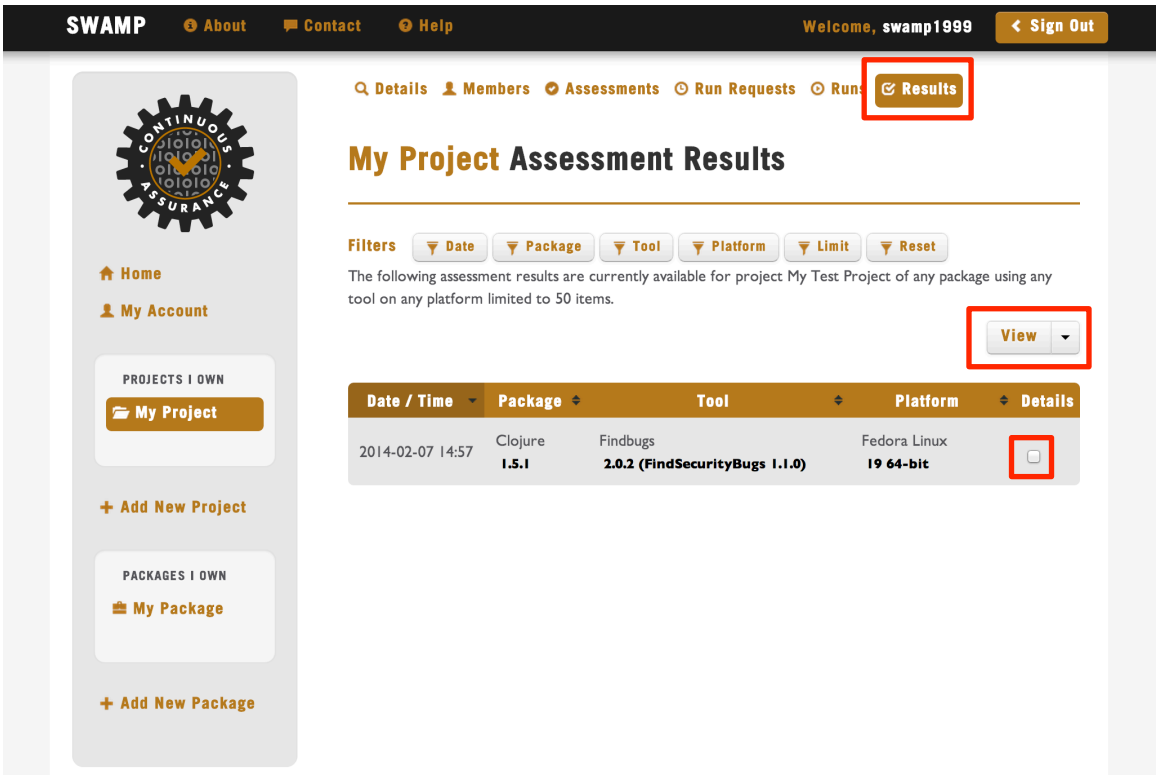
2. Select the **Runs** tab to view the status of an Assessment Run.

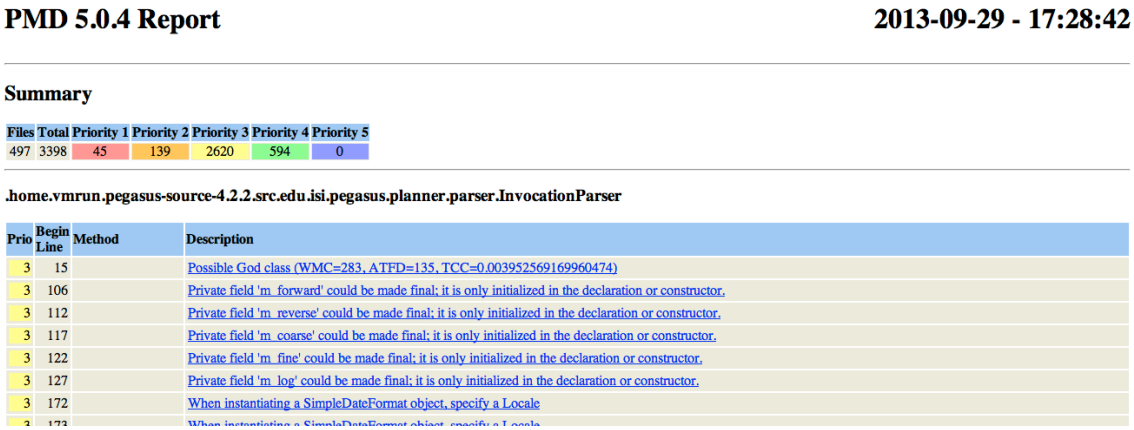


3. When an Assessment Run is done, select the **Results** tab to view the Assessment Results. Above the **Details** column select **View** and the desired viewer to see the results of your assessment run.

4. Results can be viewed in Native or Code Dx viewers.

******Note:*** *For more information on Code Dx please visit* http://securedecisions.com/products/codedx/





PMD 5.0.4 Report **2013-09-29 - 17:28:42**

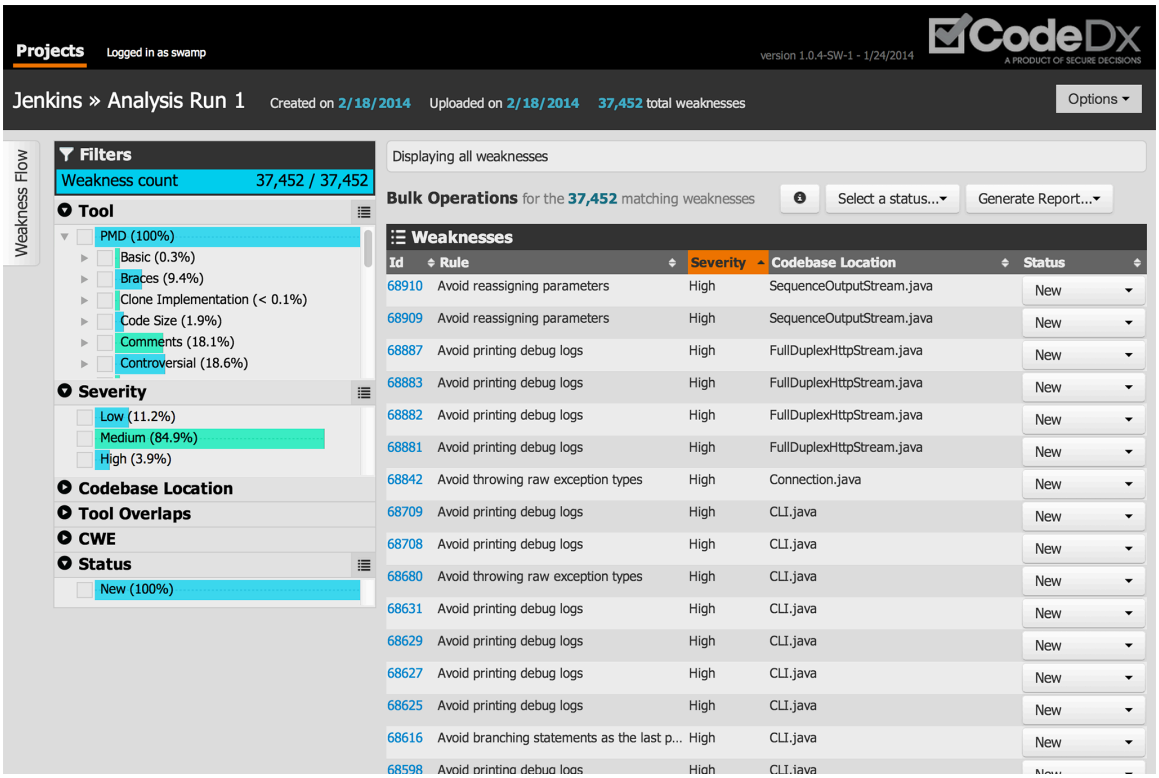
Summary

Files	Total	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
497	3398	45	139	2620	594	0

.home.vmrun.pegasus-source-4.2.2.src.edu.isi.pegasus.planner.parser.InvocationParser

Prio	Begin Line	Method	Description
3	15		Possible God class (WMC=283, ATFD=135, TCC=0.003952569169960474)
3	106		Private field 'm_forward' could be made final; it is only initialized in the declaration or constructor.
3	112		Private field 'm_reverse' could be made final; it is only initialized in the declaration or constructor.
3	117		Private field 'm_coarse' could be made final; it is only initialized in the declaration or constructor.
3	122		Private field 'm_fine' could be made final; it is only initialized in the declaration or constructor.
3	127		Private field 'm_log' could be made final; it is only initialized in the declaration or constructor.
3	172		When instantiating a SimpleDateFormat object, specify a Locale

- Above is an example of detailed results from an assessment run in the Native Viewer.



- Above is an example of an assessment run in the Code Dx viewer.

Cppcheck 1.61 Report

Summary

Total	error	warning	style	performance	portability	information
2	0	1	0	0	1	0

Severity	File	Line	Message
warning	snappy-c-master/sgverify.c	180	%d in format string (no. 4) requires a signed integer given in the argument list.
portability	snappy-c-master/sgverify.c	44	'p' is of type 'void *'. When using void pointers in calculations, the behaviour is undefined. Arithme

- Above is an example of results from an assessment run using the tool Cppcheck displayed in the Native viewer.

clang version 3.3 (tags/RELEASE_33/final) Target: x86_64-unknown-linux-gnu Thread model: posix Report

---

Summary

Total	API	Dead store	Logic error	Memory Error	Security	Unix API
4	0	1	1	0	0	2

Category	File	Line	Message
Dead store	snappy-c-master/scmd.c	111	Value stored to 'err' is never read
Logic error	snappy-c-master/snappy.c	284	The left operand of '<' is a garbage value
Unix API	snappy-c-master/sgverify.c	40	Call to 'malloc' has an allocation size of 0 bytes
Unix API	snappy-c-master/sgverify.c	116	Call to 'malloc' has an allocation size of 0 bytes

- Above is an example of results from an assessment run using the tool Clang Static Analyzer displayed in the Native viewer.

gcc-warn v4.7.2 (Debian 4.7.2-5) Report

Summary

Total
152

Group	File	Line	Column	Message
warning	scmd.c	14	6	no previous prototype for ‘usage’
warning	scmd.c	26	5	no previous prototype for ‘match_suffix’
warning	scmd.c	28	21	conversion to ‘int’ from ‘size_t’ may alter its value
warning	scmd.c	32	2	ISO C90 forbids mixed declarations and code
warning	scmd.c	36	5	no previous prototype for ‘open_output’
warning	scmd.c	44	19	conversion to ‘int’ from ‘size_t’ may alter its value
warning	scmd.c	46	22	conversion to ‘size_t’ from ‘int’ may change the sign of the result
warning	scmd.c	49	3	passing argument 2 of ‘match_suffix’ discards ‘const’ qualifier from pointer target type
warning	scmd.c	89	2	ISO C90 forbids mixed declarations and code
warning	scmd.c	95	3	passing argument 2 of ‘match_suffix’ discards ‘const’ qualifier from pointer target type
warning	scmd.c	107	2	ISO C90 forbids mixed declarations and code
warning	scmd.c	137	8	assignment discards ‘const’ qualifier from pointer target type
warning	scmd.c	145	29	comparison between signed and unsigned integer expressions
warning	scmd.c	14	6	function might be candidate for attribute ‘noreturn’
warning	scmd.c	26	5	function might be candidate for attribute ‘pure’
warning	snappy.c	79	3	cast discards ‘__attribute__((const))’ qualifier from pointer target type

- Above is an example of results from an assessment run using the tool Gcc displayed in the Native viewer.

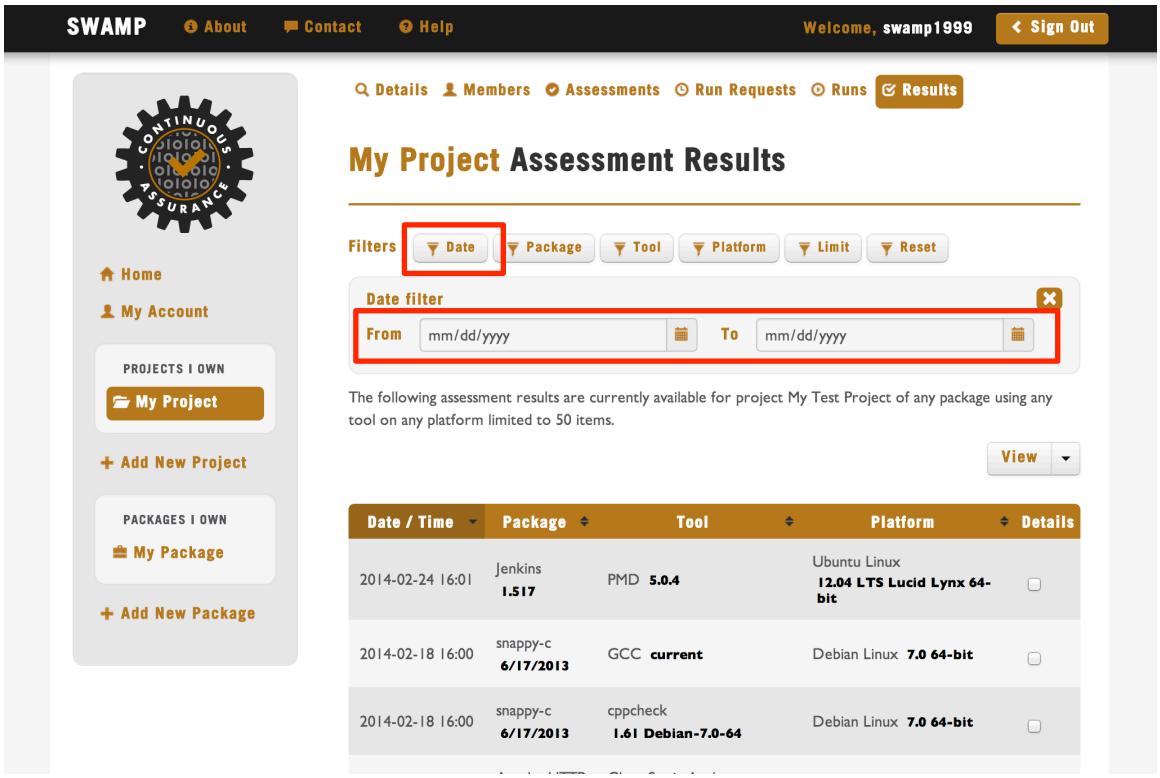
Filtering Assessment Runs and Results

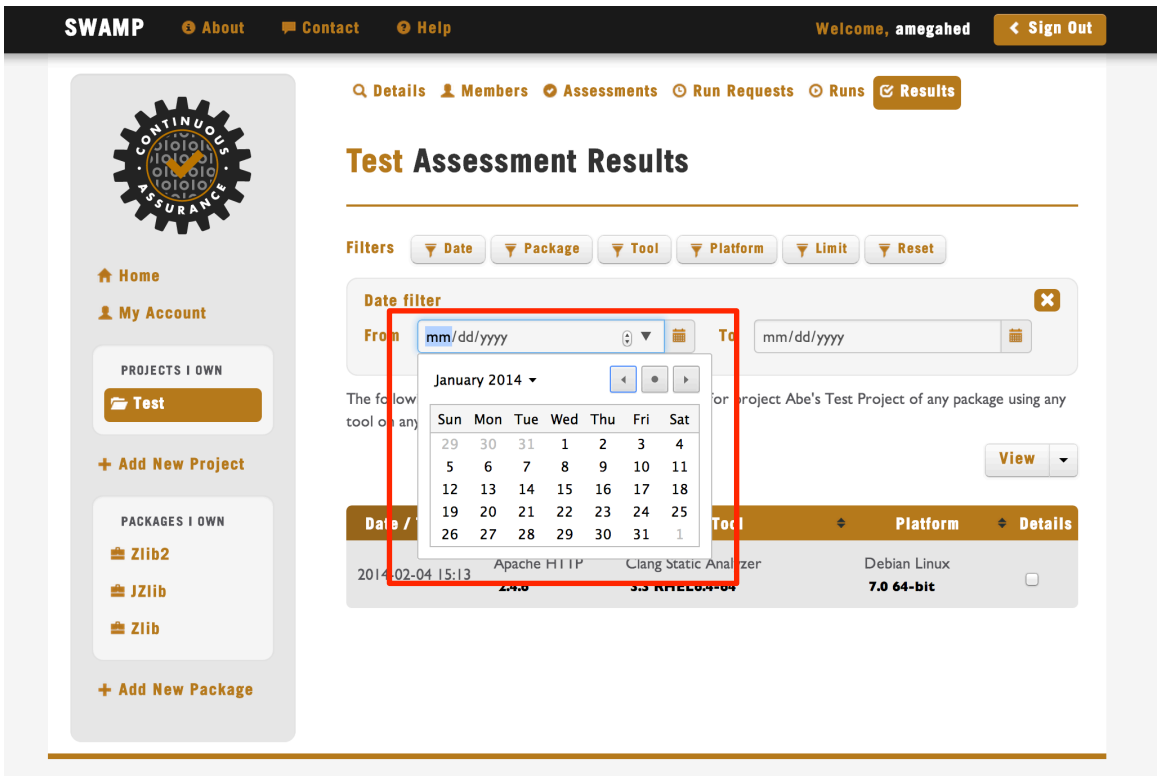
As assessment runs and results are added, it may become difficult to quickly find the results or assessment runs you wish to view. Under the Runs tab and Results tab, there is the option to filter through your Assessment Runs or Results with up to 5 different filtering choices. You may choose more than one option. Each additional filter chosen will further restrict the set of returned results.

SWAMP users have the options to filter by **Date** (date A to date B), **Package**, **Tool**, **Platform**, and/or **Limit** (Maximum number of results to display). Follow the steps below to begin filtering.

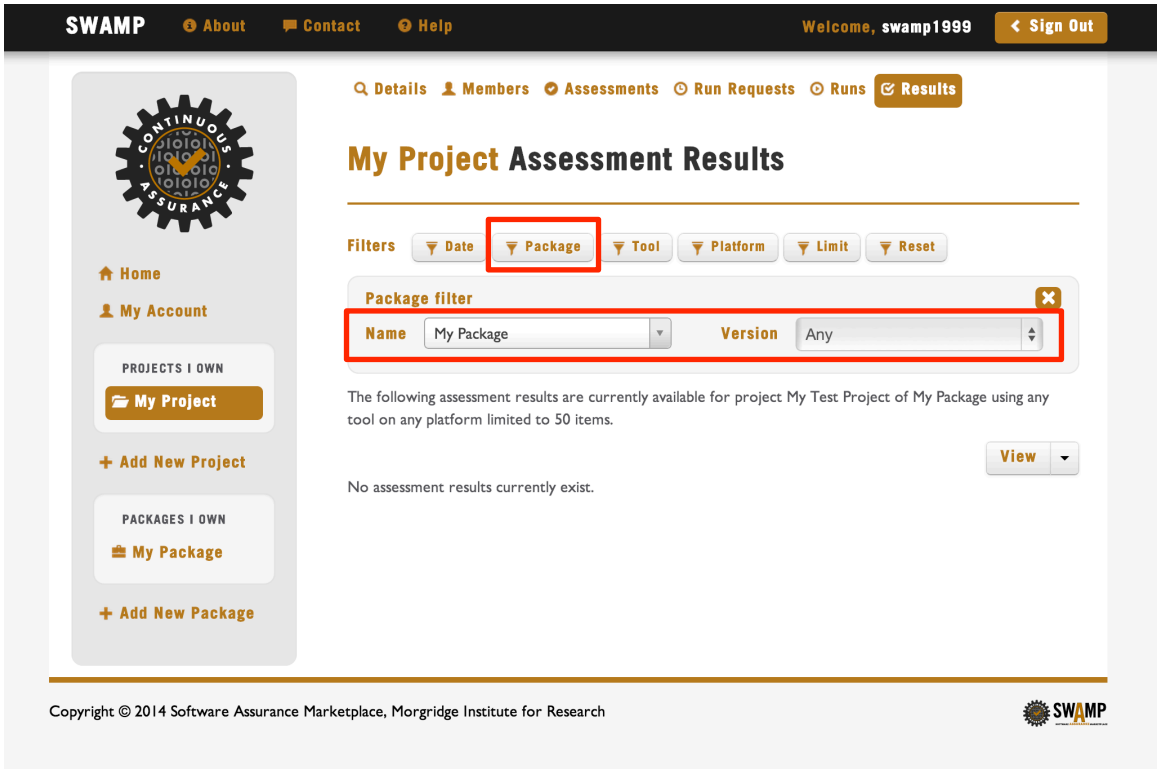
1. Select the **Runs** tab or the **Results** tab
2. Select the first filtering option from the **Filters** tab above your Assessment Runs or Results
3. Select additional filter options as desired
4. Filtering results are automatically displayed below as each filter option is added or changed
5. Select the **X** to the right of the screen at anytime to remove a filtering option or filtering options
6. Select the **Reset** button from the **Filters** tab to reset all filtering options

The following screen shots reference the **Date** filter.

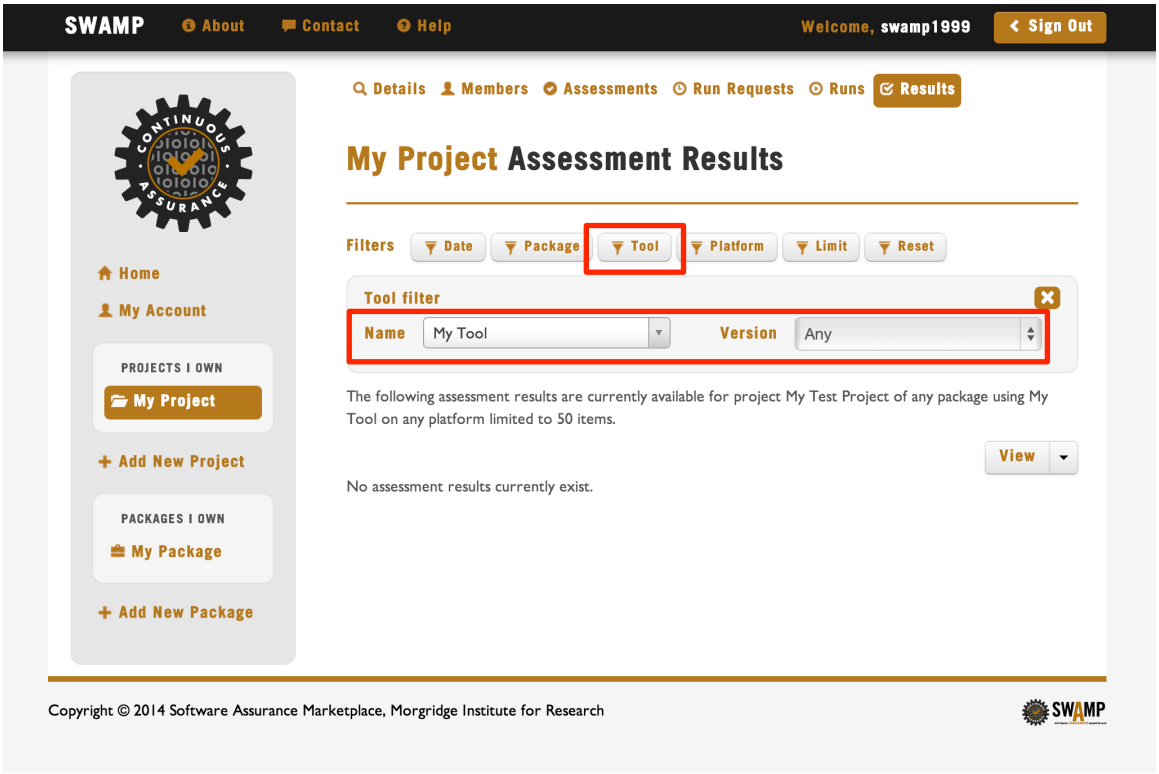




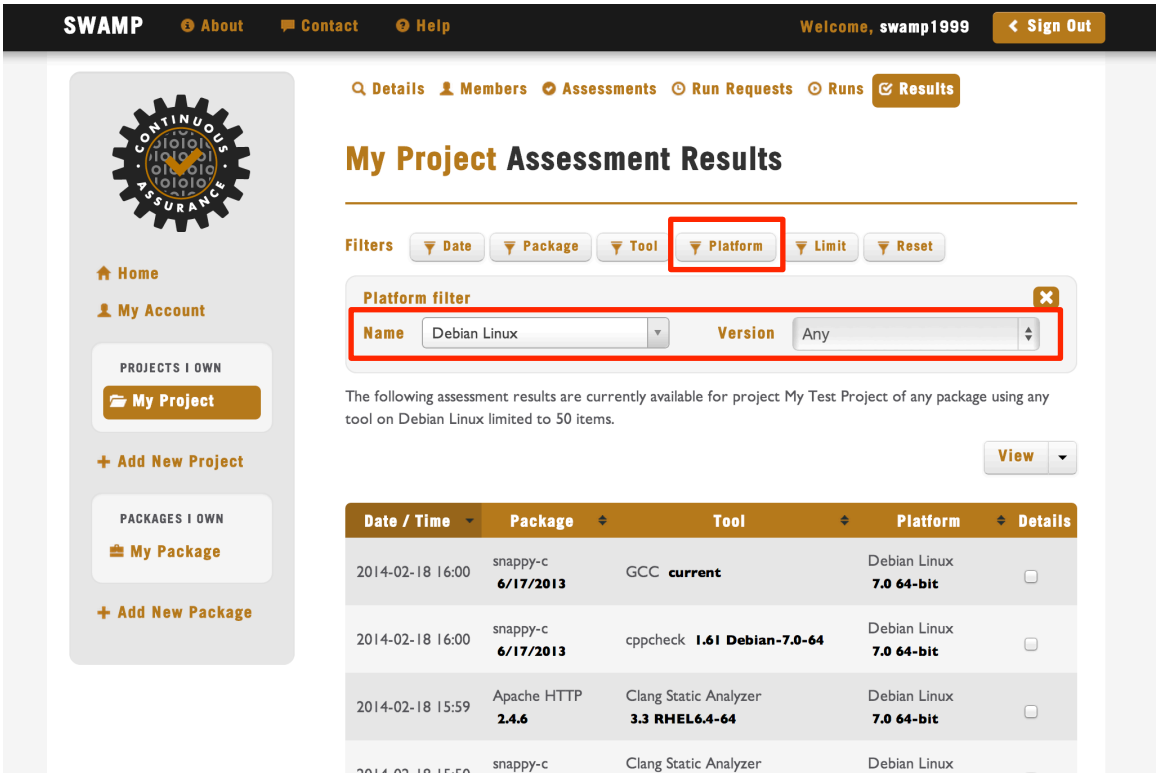
The following screen shot references the **Package** filter option.



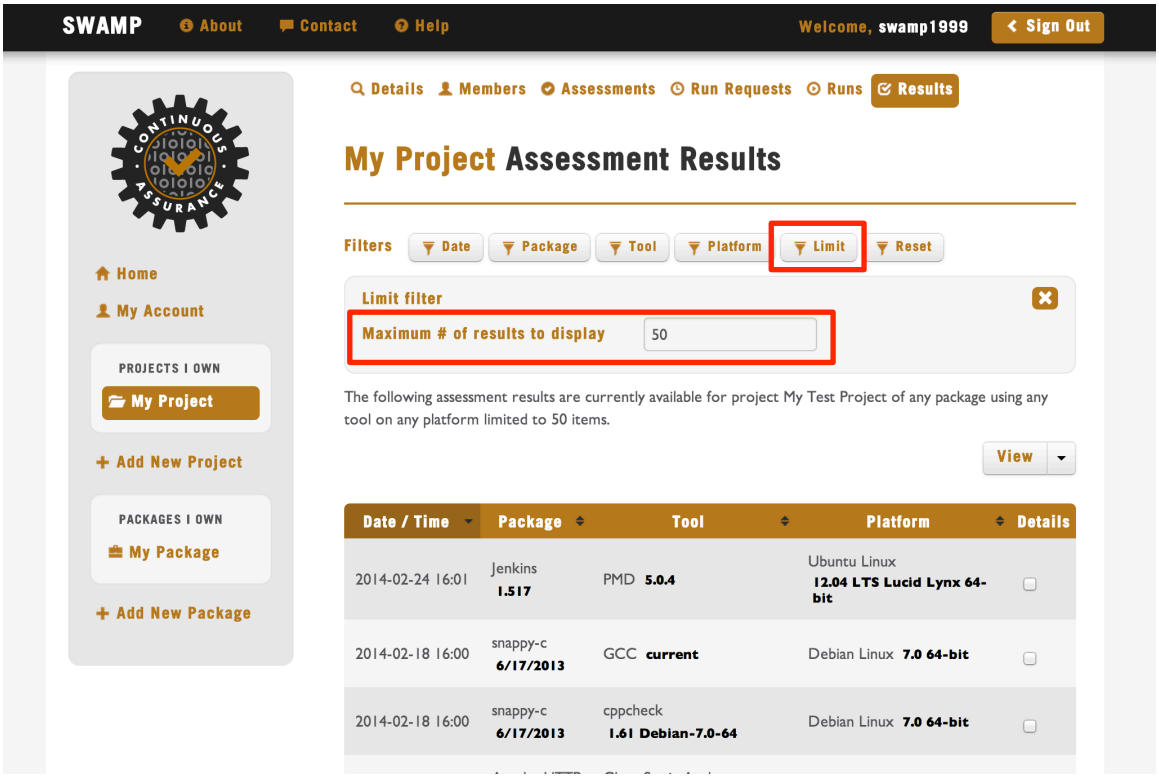
The following screen shot references the **Tool** filter option.



The following screen shot references the **Platform** filter option.

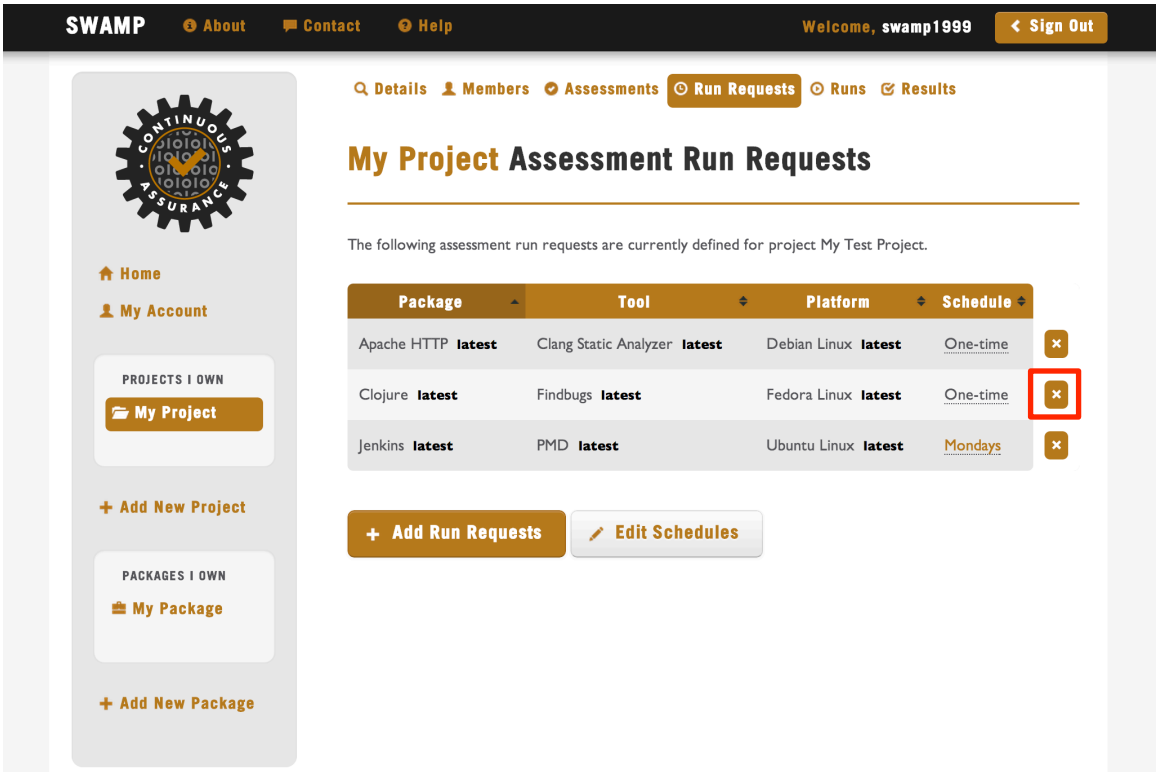


The following screen shot references the **Limit** filter option.



Delete a Scheduled Run Request

1. To delete a scheduled **Run Request** select the check box to the right of the run.

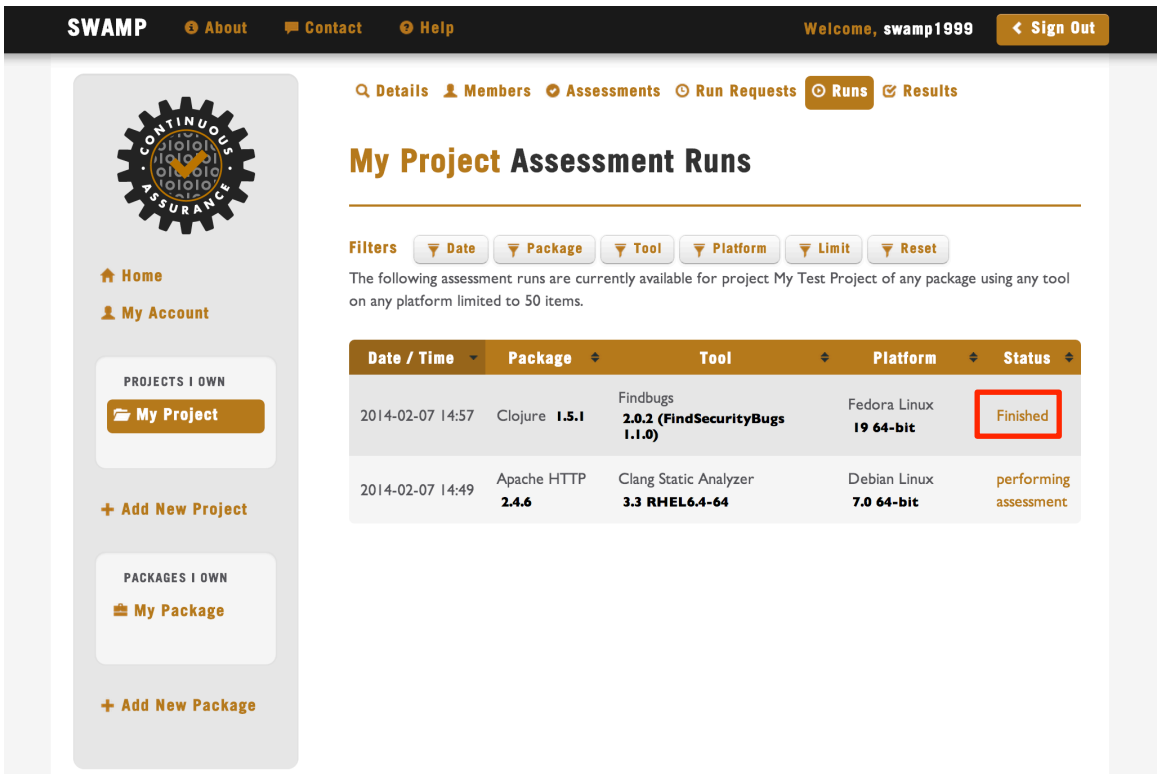


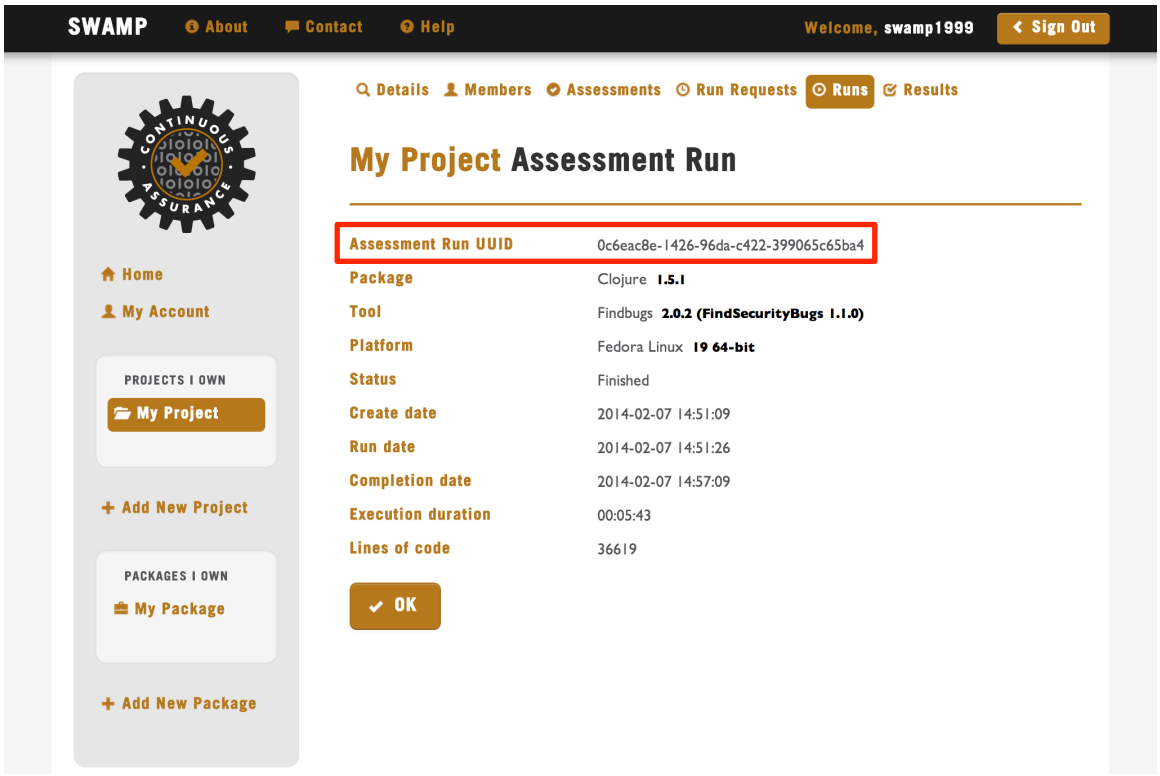
2. You will be asked to confirm the deletion. Select **OK** to delete the **Run Request** or **Cancel** to cancel your request.

Obtaining Universal Unique Identifier (UUID)

A UUID is assigned to each assessment run and helps support staff address a support ticket without requiring personal information. The UUID may be asked for when submitting a support ticket. To view the Execution Record of the Assessment Run, follow the steps below

1. Select the **Runs** tab
2. Select the link under the **Status** field


SWAMP
About
Contact
Help
Welcome, swamp1999
Sign Out
Details
Members
Assessments
Run Requests
Runs
Results
My Project Assessment Runs
Filters
Date
Package
Tool
Platform
Limit
Reset
The following assessment runs are currently available for project My Test Project of any package using any tool on any platform limited to 50 items.
Date / Time
Package
Tool
Platform
Status
2014-02-07 14:57
Clojure 1.5.1
Findbugs 2.0.2 (FindSecurityBugs 1.1.0)
Fedora Linux 19 64-bit
Finished
2014-02-07 14:49
Apache HTTP 2.4.6
Clang Static Analyzer 3.3 RHEL6.4-64
Debian Linux 7.0 64-bit
performing assessment
Home
My Account
PROJECTS I OWN
My Project
Add New Project
PACKAGES I OWN
My Package
Add New Package


SWAMP
About
Contact
Help
Welcome, swamp1999
Sign Out
Details
Members
Assessments
Run Requests
Runs
Results
My Project Assessment Run
Assessment Run UUID
0c6eac8e-1426-96da-c422-399065c65ba4
Package
Clojure 1.5.1
Tool
Findbugs 2.0.2 (FindSecurityBugs 1.1.0)
Platform
Fedora Linux 19 64-bit
Status
Finished
Create date
2014-02-07 14:51:09
Run date
2014-02-07 14:51:26
Completion date
2014-02-07 14:57:09
Execution duration
00:05:43
Lines of code
36619
OK
Home
My Account
PROJECTS I OWN
My Project
Add New Project
PACKAGES I OWN
My Package
Add New Package

The following sections referring to Assessment Tools will be a future capability in the SWAMP and are currently under development.

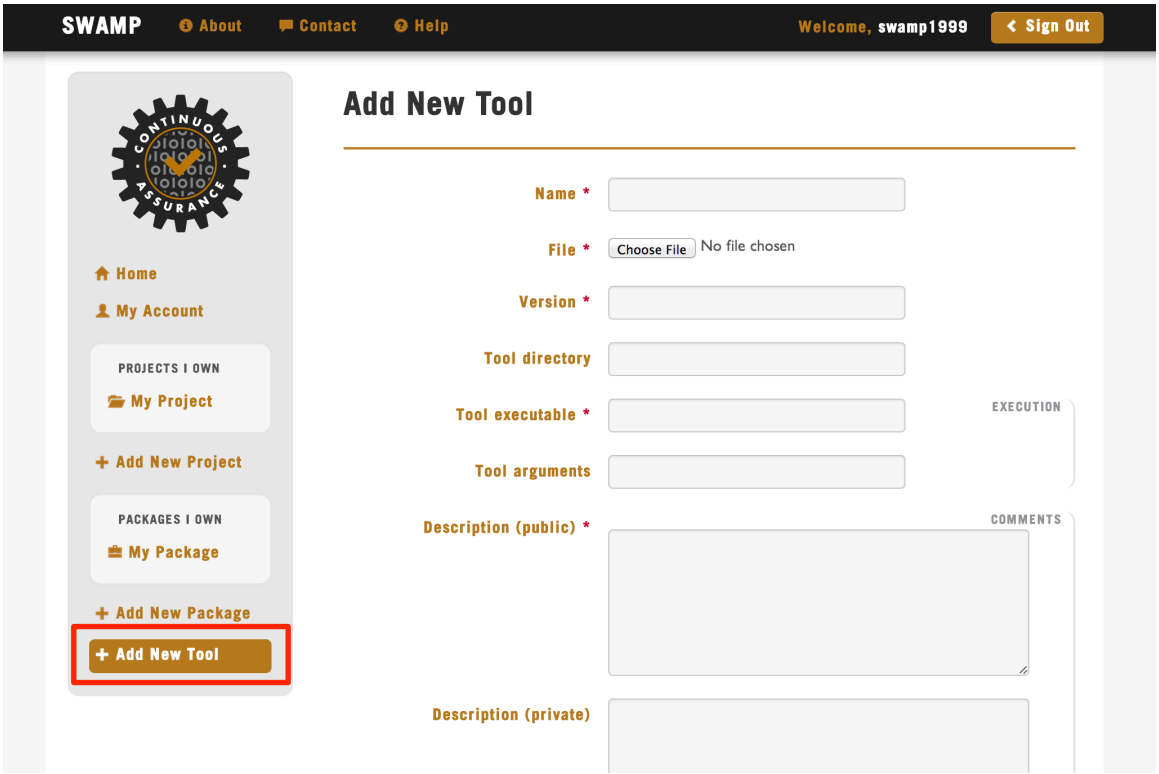
Part 5: Assessment Tools

Managing Assessment Tools

A SWAMP user may upload Assessment Tool(s) he/she has developed and then test the Assessment Tool against publically available Software Packages or personally uploaded Software Packages.

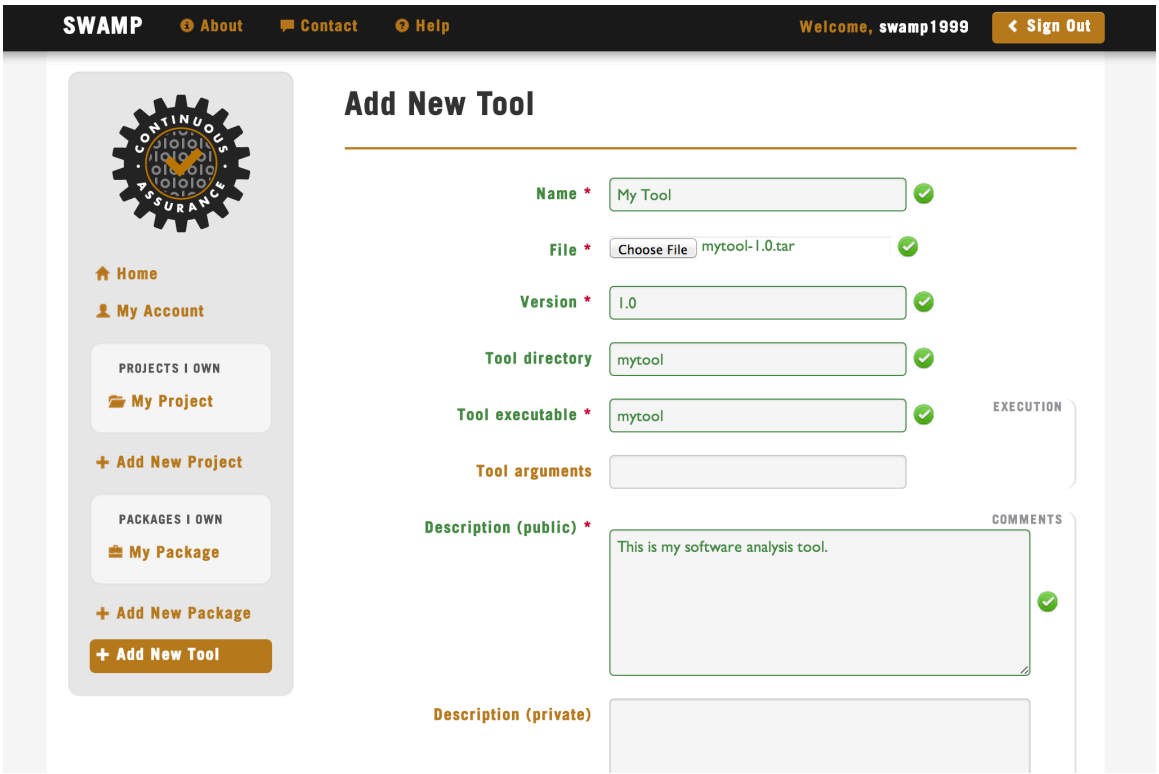
Adding Assessment Tools

1. From left side panel on any screen, select **Add New Tool**.
2. Complete the fields on the form.



Name: Name of the Assessment Tool.
File: File to upload to SWAMP.
Version: Revision of the uploaded Assessment Tool.
Tool directory: Top level directory within the archive.
Tool executable: Command to invoke tool.

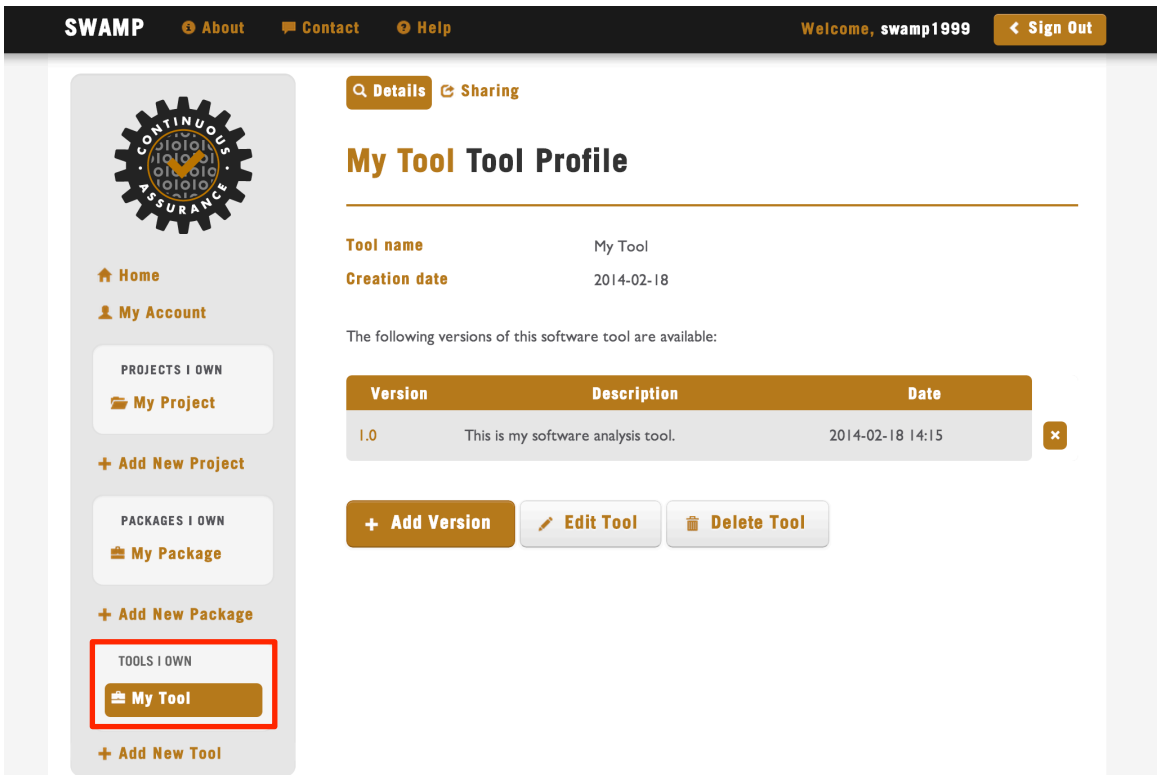
Tool arguments: Arguments to pass to the tool.
Deployment command: The command used to install the Assessment Tool.
Description (public): Description of the Assessment Tool to those who have access to it.
Description (private): Private description and comments for the Owner of the Assessment Tool.



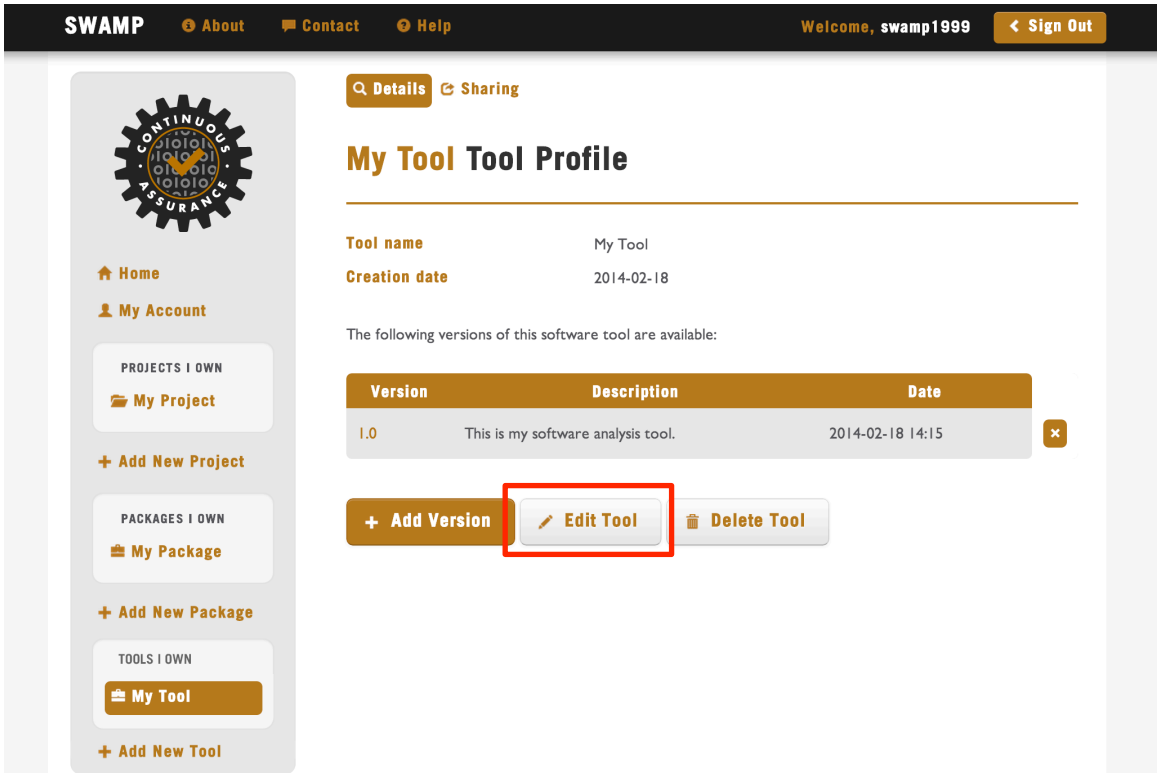
3. Select **Submit** to upload your Assessment Tool. You will receive a notification once the upload is complete.

Editing an Assessment Tool

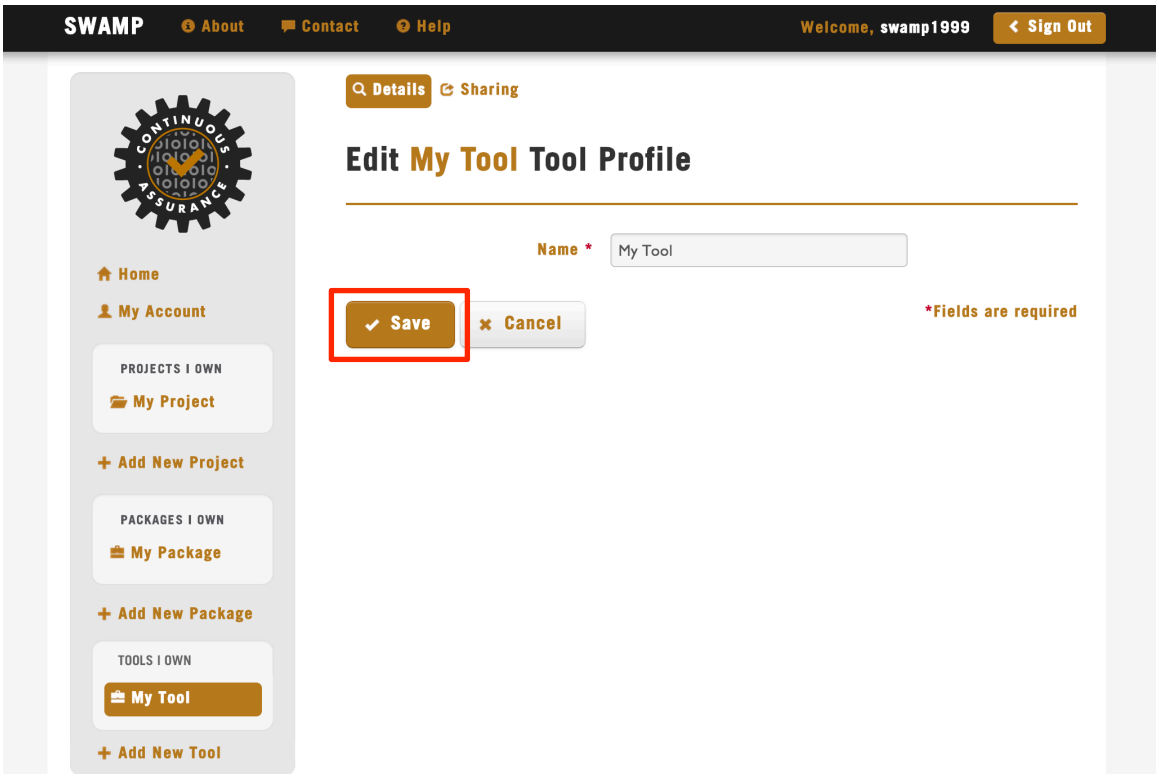
1. From the left side bar of any screen select an **Assessment Tool** to edit.



2. On the **Tool Profile** screen select **Edit Tool**.



3. From this screen you can change the name of the Assessment Tool. Type the name of the Assessment Tool and select **Save**.
4. You will receive confirmation of the change. Select **OK**.

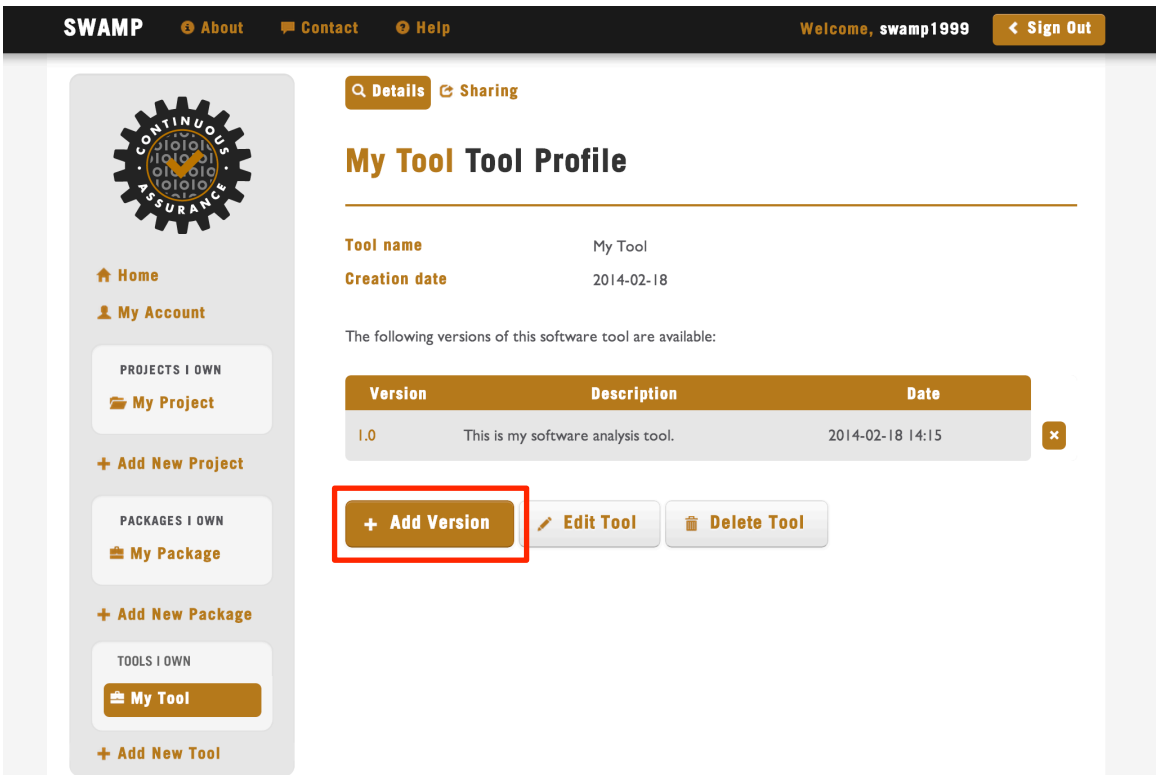


Adding, Updating, or Deleting an Assessment Tool Version

Viewing or Adding a Version of an Assessment Tool

From the **Tool Profile** screen you can view your Assessment Tool or add a new version of your Assessment Tool. Follow the steps below to add a new version of your Assessment Tool.

1. Select **Versions**.

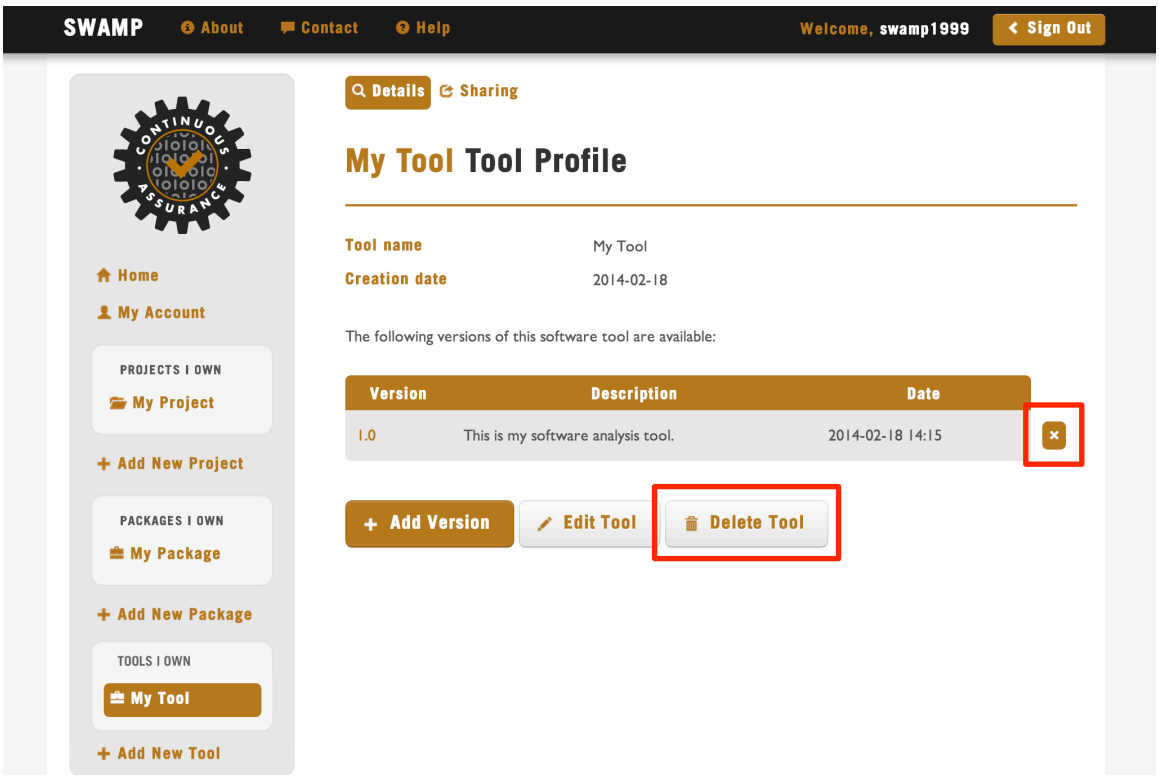


2. On the **Tool Versions** screen select **Add Version**.
3. On the **Add New Tool** screen complete the fields on the form and select **Submit**.

Name:	Name of the Assessment Tool.
File:	File to upload to SWAMP.
Version:	Revision of the uploaded Assessment Tool.
Tool directory:	Top level directory within the archive.
Tool executable:	Command to invoke tool.
Tool arguments:	Arguments to pass to the tool.
Deployment command:	The command used to install the Assessment Tool.
Description (public):	Description of the Assessment Tool to those who have access to it.
Description (private):	Private description and comments for the Owner of the Assessment Tool.

Deleting a Tool

1. To delete an Assessment Tool, from the left pane on any screen under **TOOLS I OWN**, select an Assessment Tool to delete.
2. On the **Tool Profile** screen select **Delete Tool** or the **X** to right side of the screen.



3. You will receive a prompt asking you to confirm the deletion. Select **OK** to delete the Assessment Tool or **Cancel**.

Assessment Tool Sharing: Private, Public or Protected

You can share your Assessment Tools in one of three modes:

- Private
- Public
- Protected

Private: Only the Project Owner can see Assessment Tools.

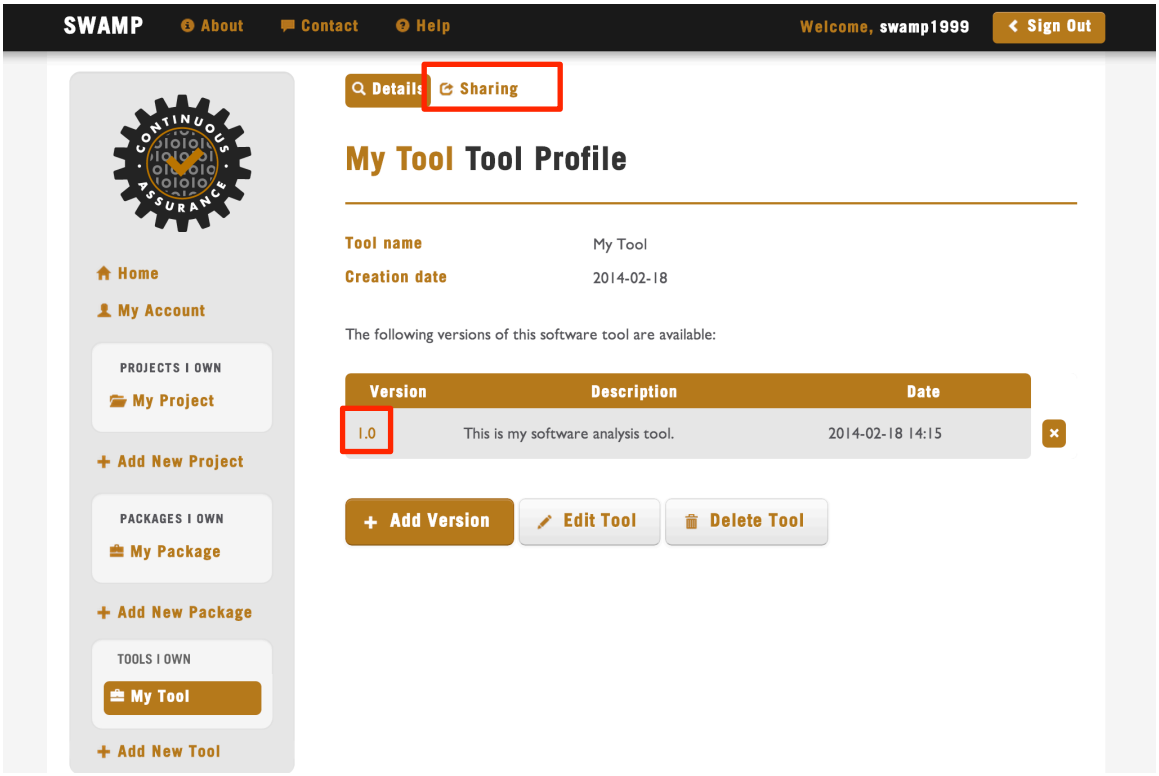
Public: Every SWAMP user can see Assessment Tools.

Protected: Project Owners can choose to share Assessment Tool with selected Projects and by default with members of the selected Project.

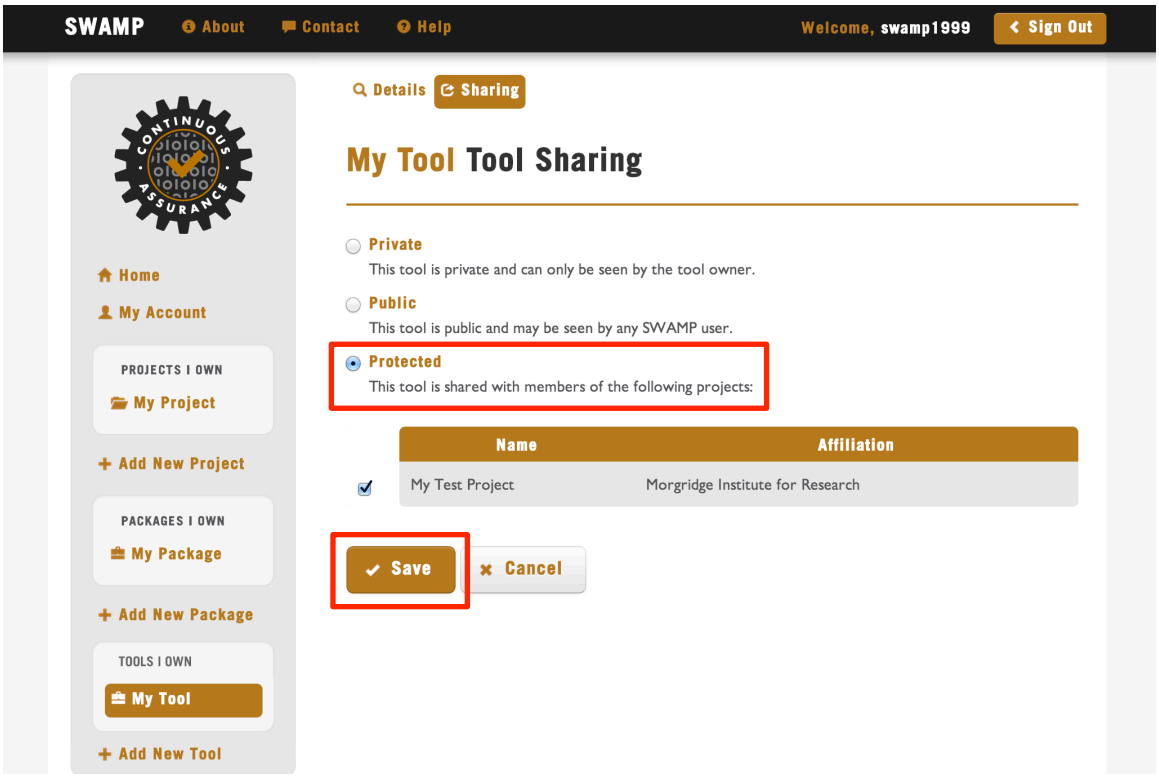
1. Navigate to the **Tool Profile** screen.

2. Select the **Assessment Tool** version you wish to link with the project you have chosen.

3. Select **Sharing** tab at the top of the screen.



4. The **Package Sharing** screen appears.



5. Select the radio button to choose what level of access to the **Assessment Tool** you wish to give SWAMP users. When choosing Protected, select the Projects with which you wish to share your **Assessment Tool**.

6. Protected must be chosen to share your **Assessment Tool** version with a Project.

7. Select **Save**.

Part 6: Helpful Resources

Troubleshooting

Status field indicates, "**Finished with errors**."

After an assessment run has been completed the status of the run will be displayed, if your run has "finished with errors" this means that the build has failed due to an incorrect Build System and/or the selected package is not compatible with the selected platform.

1. Check to make sure the correct **Build System** is chosen
2. Check to make sure the selected **Package** and **Platform** are correct and compatible
3. You can view the results of the failed build by selecting the **Native** viewer and downloading the .tar ball file.
4. The .txt file can then be viewed to determine where the assessment run failed.

Status field indicates, "**Unable to run, queued** or **Unable to start VM**."
The selected **Package** and selected **Platform** are incompatible

1. Check to make sure the correct **Package** and **Platform** have been selected.
2. If an incompatible **Package** or **Platform** have been chosen, select the version of the **Package** you are trying to run an assessment on
3. Select **Edit** at the bottom of the screen to change the **Platform**
4. Change the **Platform** to the compatible **Platform**
5. Select **Save**

Submitting a Support Ticket

1. Obtain the Unique Universal Identifier (UUID) for a support ticket
2. Select the **Runs** tab
3. Select the link under the **Status** field
4. Navigate to https://ticket.continuousassurance.org to submit a support ticket

Glossary

Assessment Run: Specifies one Tool to assess one Software Package on one operating system Platform.

Assessment Tool: An Assessment Tool analyzes a Software Package to find weaknesses that could lead to security vulnerabilities. One person owns an Assessment Tool.

Continuous Software Assurance: A process that affirms software functions as intended, free from vulnerabilities intentionally or unintentionally inserted into the code. This is achieved through continuous assessments.

Execution Record: Displays statistics about the scheduled Assessment Run.

Owner: A User that has requested ownership privileges and has been vetted by a SWAMP Administrator, who owns a Project and/or Software Package, (Future Option: Assessment Tool).

Platform: The operating system environment in which an Assessment Run occurs.

Project: A person or group of people working together for a common purpose, for example to create better assessment tools, and/or to mitigate weaknesses in Software Packages.

Project Member: A person who has accepted an invitation to join a SWAMP project. Project Members are able to create Assessment Runs, schedule Run Request, and view Assessment Results.

Run Request: A request to execute one or more Assessment Runs as soon as possible after the requested time. Project Members can schedule Run Requests to occur daily, weekly, or monthly. Members can schedule Run Requests that are a combination of daily, weekly, or monthly times.

Software Package: A software component or system used by others.

User: A person granted permission to belong to the Software Assurance Marketplace. A SWAMP user must be a member of a project to use Assessment Tools, Platforms, and view Assessment Results.

Table 1. Compatibility of Platforms and Tools

		Tools			
	PMD	**FindBugs**	**Cppcheck**	**Gcc**	**Clang Static Analyzer**
Platforms					
Red Hat Enterprise Linux 6.4 32-bit	Yes	Yes	Yes	Yes	Yes
Red Hat Enterprise Linux 6.4 64-bit	Yes	Yes	Yes	Yes	Yes
Fedora 18 64-bit	Yes	Yes	Yes	Yes	Yes
Fedora 19 64-bit	Yes	Yes	Yes	Yes	Yes
Ubuntu 12.04.2 64-bit	Yes	Yes	Yes	Yes	Yes
Debian 7.0 64-bit	Yes	Yes	Yes	Yes	Yes
Scientific Linux 5.9 32-bit	Yes	Yes	Yes	Yes	Yes
Scientific Linux 5.9 64-bit	Yes	Yes	Yes	Yes	Yes
Scientific Linux 6.4 64-bit	Yes	Yes	Yes	Yes	Yes

Note: It is important to select the correct Platform when running an assessment. Selecting the incorrect Platform will generate false results.